We Will Rebuild Back Better!

CrossTalk

Issue 63:11 63 Years Of Service To Our Community November 2022

2022 Club Officers

President :	**Anthony Starr, K3TS**
Vice President :	**Jonathan Pearce, WB2MNF**
Treasurer :	**Alan Arrison, KB2AYU**
Recording Secretary :	**Karl Frank, W2KBF**
Corresponding Secretary :	**Ronald Block, NR2B**

Trustees - 4 year term

James Wright, N2GXJ	***(2019-2022)***
Mark Gottlieb, KK2L	***(2020-2023)***
Robert Fields, KC6AOH	***(2021-2024)***
Charles Lanard, KD2EIB	***(2022-2025)***

Board of Directors - 3 year term

Robert Durham, W2RAD	***(2020-2022)***	**William Price, NJ2S**	***(2021-2023)***
Herb Dyer, KT2Y	***(2020-2022)***	**James Clark Sr, KA2OSV**	***(2022-2024)***
Charles Colabrese, WA2TML	***(2021-2023)***	**Jeffrey Garth, WB2ZBN**	***(2022-2024)***

General Membership Meeting
Wednesday, November 2, 2022 @ 1930 Hours
In-Person & ZOOM - Pfeiffer Community Center

Tech Saturday Forum
Saturday, November 5, 2022 @ 0900 Hours
W2MMD Clubhouse

The DigiNet
November 7 & 21, 2022 @ 2000 Hours
ZOOM Meeting Net

License Testing Session
Thursday, November 10, 2022 @ 1900 Hours
W2MMD Clubhouse

Board of Directors Meeting
Wednesday, November 16, 2022 @ 1900 Hours
W2MMD Clubhouse

Dinner @ The W2MMD Clubhouse
Wednesday, November 30, 2022 @ 1800 Hours

Tuesday Noon Day 2 Meter Rag Chew Net
Every Tuesday @ 1200 Hours
Tuesday Night 10 Meter Rag Chew Net
Every Tuesday @ 2000 Hours - 28.465 MHz

Thursday Night 2 Meter Rag Chew Net
Every Thursday @ 2000 Hours

Inside This Issue…

President's Message .....Page 2
November 2nd General Meeting.....Page 4
Welcome New Members .....Page 4
Tech Saturday Forum .....Page 5
Not So Fast! .....Page 6
VE Exam Summary.....Page 7
DA's & DIT's.....Page 8
Education Connection.....Page 9
Hams Assisting Red Cross.....Page 11
Regional Hamfest/Events.....Page 12
VLF With Earth Probe Antenna..Page 12
Fox Hunt XXV Summary.....Page 13
At The Repair Bench .....Page 17
One Saturday Morning.....Page 19
Basic Troubleshooting - Part 3 ....Page 22
Test & Repair Bench .....Page 26
ARRL SNJ SET .....Page 27
AMSAT Tracking Artemis I .....Page 28
NJ's ITU Secretary General.....Page 29
Element 4 Question Quiz.....Page 33
General Meeting Minutes.....Page 36
Board Meeting Minutes…….Page 39
November Birthdays .....Page 45
Last Page Calendar .....Page 50

President's Message
Tony Starr, K3TS

Here we are in the waning months of **2022**, and wow, what a year it has been for **GCARC**! Our new HF antenna looks just stunning sitting atop our "new" 70 foot tower, and it works as good as it looks. Our newly remodeled VHF room is coming along nicely, and we are currently shopping for new equipment and antennas for it, thanks to the wonderful grants that we received from both the **ARRL** and **ARDC** foundations; and our membership continues to grow as we grow the hobby, thanks to our training and licensing programs. We have come a long way in 2022, and the future for **GCARC** is looking great. It is a great time to be a member of our Club!

We have enjoyed a lot of outside activities this year, from Field Day, to the Hamfest, to our antenna projects, but as the days grow shorter and the temperatures drop, we will be finding ourselves pursuing more indoor activities, perhaps the most important one being operating on the air. While many new hams are just itching to get on the air, a surprising number don't find the opportunity to do so, for one reason or another, so as part of our ongoing efforts to promote the hobby, we will be hosting some organized on-air sessions from our **W2MMD Clubhouse Station**, to give the new operators, or those who do not have a station at home, the chance to get on the bands and make some QSOs. If you are a new ham, struggling to make contacts with 100 Watts to an end-fed wire in your attic, you are in for a very pleasant experience using a large directional antenna on a tower with full legal limit power. It is ham radio on a whole new level. Some of these sessions will be held in conjunction with major DX contests, while others will be on **Tech Saturdays**, but the idea is to get our members on the air. Watch the web page and reflector for detailed announcements.

Speaking of working DX, propagation has been great lately, as the sunspot cycle ramps up. The Solar Flux Index hit 165 during the month of October, and 10 meter band openings to Europe were an almost daily occurrence. And you did not need a beam antenna on a tower, or a kiloWatt of power to work the DX either. I was working DX daily on 10m SSB over several weeks time, from my truck with just an 8 foot whip and my 200 Watt Kenwood transceiver. When the band is open, 10 meters can be great. If you are a budding DXer, now is the time to get on the air and work some new countries. Building a good antenna for 10 meters is easy, or you can just use a simple CB antenna like an Imax 2000 or an A99. The main thing is to get on the air, and work some DX while it is there, because it won't be around forever. Late morning or lunchtime is a good time to look for DX on ten. Sign up for LoTW, and watch the DXCC credits roll in. It has never been easier to earn a DXCC award as it is right now.

While we have been doing a great job of recruiting new members lately, I would like to take the opportunity to address our sizable population of inactive members, who for one reason or another, have not been out to a meeting, or the Clubhouse, or any other GCARC group activity for a while. My invitation to our inactive members is this : Since the last time you joined us, we have grown larger, created new projects and activities, and have greatly improved our Clubhouse infrastructure. With each month that has gone by, our activities have increased and become more diverse. Many new friends and neighbors have heard about us, and have joined us for some ham radio fun. And we have been having a great time. But we miss you, and would love to have you come out and join us again.

President's Message - Continued on page 3

President's Message - Continued from page 2

You will be amazed at how much we have going on, but you will have a great time once you find the time to join us again. And we are hoping, that you will wonder why you ever left. I know, because I left for a long time. But I am so glad that I came back! Won't you come back too?

That is about all I have for now. Except that I ask all of you to please give a warm welcome to our six newest GCARC members, who are :

- **Andy Asch, N2MVD, of Browns Mills, NJ (Attending AD2CS' General class)**
- **Ralph Daggan, of Sewell, NJ (Attending AD2CS' Technician class)**
- **Donald Martel, of Blackwood, NJ (Attending AD2CS' Technician class)**
- **Rusty Rust IV, of Sewell, NJ (Attending AD2CS' Technician class)**
- **Miroslaw Radon, KE2AEW, Technician Class License, of Berlin, NJ**
- **Dave Sheppard, W2PAX, General Class License, of Naples, FL**

I hope to see each and every one of you out at our November meeting in Williamstown on November 2nd, or at least on the live Zoom link, and, the Tech Saturday Forum on November 5th.

Until then, 73 for now.
de K3TS

September 28, 2022 with 17 attending

"Dinner @ The Clubhouse"
Wednesday, November 30, 2022 @ 1800 Hours

W2MMD Clubhouse

An informal get together to share a meal and chat

Here are the nominations of candidates for Club officers for 2023. Nominations from the floor will be taken at our November 2nd General Membership Meeting. Voting will take place at our General Membership Meeting on December 7th.

The following candidates were nominated for offices for 2023 :

- **President : Jonathan Pearce, WB2MNF**
- **Vice President : Ron Block, NR2B**
- **Treasurer : Al Arrison, KB2AYU**
- **Recording Secretary : Karl Frank, W2KBF**
- **Corresponding Secretary : Frank Romeo, N3PUU**
- **Director : Chris Prioli, AD2CS**
- **Director : Jim Wright, N2GXJ**
- **Trustee : John O'Connell, K2QA**

General Membership Meeting

Wednesday, November 2, 2022 @ 1930 Hours

Pfeiffer Community Center
Simulcast Live Via ZOOM

Guest Speaker : Riley Hollingsworth, K4ZDH
ARRL Volunteer Monitor Administrator
Special Counsel FCC Enforcement Bureau, Retired

Also final submission of nominees for the 2023 Club Officer Elections

Welcome New Club Members :

Andy Asch, N2MVD, who has a Technician Class license and lives in Browns Mills, NJ.
Ralph Daggan, an Associate Member and lives in Sewell, NJ.
Donald Martel, an Associate Member and lives in Blackwood, NJ.
Miroslaw Radon, KE2AEW, who has a Technician Class license and lives in Berlin, NJ.
Rusty Rust IV, a Family Member (son of W2LJR) and lives in Sewell, NJ.
David Sheppard, W2PAX, (grandson of **Gurdon Cooper W2PAX**, Club President 1966) who has a General Class license and lives in Naples, FL.

We are glad to have you as members of the Club and hope to see you regularly at Club meetings, events, and activities. Hope to see you at the November 2nd General Membership Meeting , either in-person or on ZOOM and the November 5th Tech Saturday Forum. We hope to hear you on the Tuesday Night 10M Rag Chew Net. The semi-monthly DigiNet on November 7th and 21st at 8:00 pm via ZOOM. And please tune in to our Sunday Night Skywarn Net at 7:30 pm and the ARES Net at 8:00 pm, the Tuesday Noon Day 12:00 pm 2M Rag Chew Net, and the Thursday Night 8:00 pm 2M Rag Chew Net, all on our 147.180 MHz repeater or on EchoLink node : W2MMD-R.

Need a ride to a Club meeting, event, or activity?

Just send a message to the Club's e-mail reflector asking if a member can pick you up

GCARC <*at*> MAILMAN <*dot*> QTH <*dot*> NET

All Club members have access to this FREE e-mail service

W2MMD

www.facebook.com/W2MMD

twitter.com/w2mmd_gcarc

Facebook

GCARF

Tech Saturday Forum
November 5, 2022 @ 0900 Hours
W2MMD Clubhouse

Exploring The New Clubhouse HF Station
Also an introduction to SDRAngel
Q & A Session About All Things Ham Radio and Socializing

Tech Saturday sessions are held at the W2MMD Clubhouse on the first Saturday of the month following the Wednesday Night General Membership Meeting and are designed to be hands-on collaborative events focused on using the Clubhouse resources to demonstrate various aspects of Amateur Radio and related technical areas. Previous sessions have covered USB software-defined radios, Raspberry Pi and Arduino devices, satellite operations and other similar topics.

We would like to invite all of our new members as well as our veteran members to our Tech Saturday Forums to help answer any questions and discuss any and all issues the new members have come across as they progress through the ***Amateur Radio Experience.***

The Discussion Theme is a QSO starting point - a way to initiate a conversation. All Tech Saturdays are an open QSO of all subjects of Amateur Radio interest.

All questions are welcome as well as a venue for hams to show off their latest ham radio projects or gadgets. Have a problem programming that HT, we can help! Not sure what radio or antenna to buy, we can help!

All Club Members who would like Clubhouse access to use its radio equipment would have to have some brief "Elmering" on the Clubhouse rules, such as using the alarm system, the A/C and heaters, the antenna system, and the radio equipment. Usually, the Club's HF station is reserved for local use on Tech Saturday. This month is no exception. However, the Clubhouse work efforts will come before any HF Elmering this month. We will be happy to work with the HF station after the chores are done!

All are welcome - Hams and Non-Hams - Club Members and Non-Club Members.

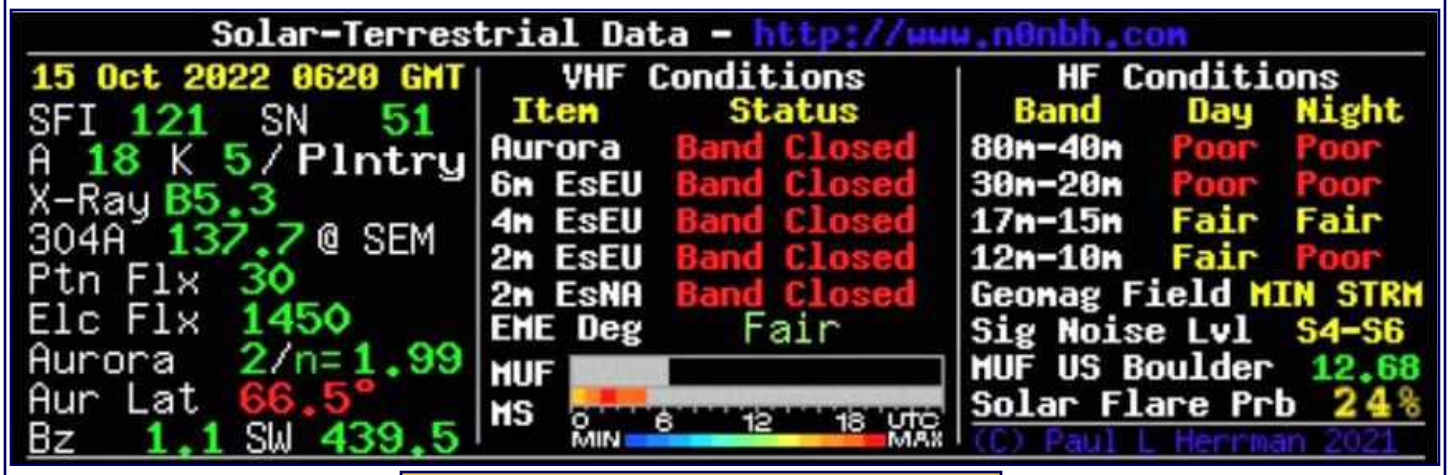
Gloucester County Amateur Radio Club YouTube Channel
https://www.youtube.com/user/W2MMDGCARC

The YouTube channel contains General Membership Meeting Presentations, DigiNet Classes, Hamfest Programs and Pictures, and other video media content. Please subscribe to our YouTube Channel.

Not So Fast!

By Jim Wright, N2GXJ

You've seen charts like this one, from **N0NBH (https://www.hamqsl.com/solar.html)**, showing current solar conditions along with a prediction of HF Conditions. But not so fast! Compare here the listed HF condition of "poor" for 40 meters, vs what I was actually seeing on FT8 on 40 meters. Poor? Maybe not! Just goes to show, there's no substitute for turning on the radio and seeing for yourself!



October 15, 2022 N0NBH Chart

Actual conditions seen same time on 40

GCARC Monthly VE Exam Testing Summary

October 13, 2022

Gary Reed, N2QEE *reports :* The monthly VE session was held on 10/13/2022 at the W2MMD Clubhouse with three candidates in attendance. Two candidates were successful with one upgrade to Extra and one new Technician :

- **Stanley Slachetka WA2JRZ** of Woodbury Heights upgraded to Amateur Extra with his upgrade appearing on the FCC ULS on 10/14/2022 in the afternoon.
- **Miroslaw Radon KE2AEW** of Berlin achieving the Technician license with his license appearing on the FCC ULS on 10/15/2022 in the early AM.

The FCC is doing a good job in processing the applications after they are received from the ARRL VEC.

In response to a question at a recent exam session, I have learned from the ARRL VEC that according to the FCC, the VEs cannot volunteer test score information to the candidate. However, if the candidate asks for their score the VE must provide it.

The VEs who helped with this session were :

- **Chris AD2CS**
- **Rich W2RHS**
- **Jeff WB2ZBN**
- **Mike N2WOQ**
- **Mike KG4JYA**
- **Earl KC2NCH**
- **Jerry K2EAB**
- **Steve W2SEF**
- **Gary N2QEE**

Thank you to the VEs who participated.

Next month's VE session will be held 11/10/2022 at 7 PM at the W2MMD Clubhouse in Mullica Hill.

Contribute to the Gloucester County Amateur Radio Foundation with your Amazon Smile Purchases

Amazon Smile allows customers to designate a charitable organization that will receive a donation of 1/2 of one percent of your purchases - at no costs to you.

Your Amazon purchases will help fund equipment acquisition, education, and research activities at the W2MMD Clubhouse.

Sign into your Amazon account using the QR code or go to smile.amazon.com to set up the Gloucester County Amateur Radio Foundation as your charity.

DA's and DIT's

>>Congratulations the **Stan Slachetka, WA2JRZ**, for upgrading to Amateur Extra Class.

>>Get well to **Greg Ciraula, W5DO**, who receiving treatment for a medical issue.

>>**Chris Wawak, KC2IEB**, reports , Sounds like some folks decided to start using the ANSRVR to hold a sort of net for APRS on Thursdays. You can check in very easily :

1. Send an APRS Message to ANSRVR with "CQ HOTG your message"
2. Your radio will now get messages from the APRSTHURSDAY group!
3. You can try to set up a QSO by sending a message like "CQ HOTG looking for qso NJ FM29"
4. If someone replies, send an APRS message to their callsign (W2MMD-14 or whatever) and have fun!
5. If you get annoyed, send U HOTG to ANSRVR and you will be unsubscribed.

>>Condolences to **Jim Kinkade, KC2JAX**, and family with the passing of his XYL Carol.

>>Get well to **Bob Demola, KD2GFL**, recovering from recent stay in the hospital.

>>Congratulations to **Kenny Denson, WB2P**, for his recent engagement! When's the wedding, Kenny!

>>It appears the **442.100 MHz** repeater is back on the air, but may require some more testing. So give the repeater a try and if you hear a problem with it, contact **Tony K3TS**.

>>A hearty **Bon Voyage** to **Herb Dyer KT2Y**. Herb is moving to the Sunshine State this month leaving the rest of us to shovel the snow! ***"May the road rise up to meet you, May the wind be always at your back!"***

Club Elmers

We are still looking for some more Club Elmers. If you would to add your name to the Elmer's List, send your specialty to w2mmdgcarc@gmail.com. Here is what we have so far :

- **Tony Starr, K3TS : Antenna Construction, Contesting, and CW Help / Training**
- **Ken Bozarth, KN2U : Antennas**
- **Jeff Welsh, KD2AZI : Boat Anchor Repair / Operation, Raspberry Pi, Arduino, Python, POTA, Mobile Installation / Operating**
- **Karl Frank, W2KBF : Digital Messaging (FLDIGI, WinLink)**
- **Herb Dyer, KT2Y : DMR Radios / Programming**
- **Ron Block, NR2B : Lightning protection and grounding**
- **Chris Prioli, AD2CS : Kit Building, Radio Programming, PC Troubleshooting and Electronic Troubleshooting**
- **John Zaruba, K2ZA : Yaesu Radio Programming**

The Education Connection
By Chris Prioli, AD2CS

November 2022

The DigiNet training sessions have begun, with two of them behind us as this is being written. All indications are that the group - instructors and students alike - are all in favor of the newly implemented ZOOM methodology. It looks like that one is a keeper.

Gary Mirkin WA3SVW, with assistance from **Steve Farney W2SEF**, has been doing a great job as instructor for the current topic, ***FLDIGI***, ***FLMSG, and FLAMP***. Gary is also the primary (designated) ZOOM host for these sessions and will remain so even when other individuals are instructing. The ZOOM sessions are being recorded and are being made available for viewing once some housekeeping edits are made.

Speaking of current topics, Gary tells me that there will be one or two more meetings to finish of the current topic. At that point, we are moving on to VARA and will cover both VARA-FM and VARA-HF, ably instructed by **Mike Thompson KG4JYA**. Mike has had some good success working with VARA and is a natural choice to instruct the group at large. The way this will work is that Gary will open the ZOOM meeting, and will then turn the hosting duties over to Mike, who will present his materials as the working host of the meeting.

Stay tuned to this column for future announcements regarding the upcoming DigiNet topics.

On another note, we are now, as this is being written, into the sixth week of the session, which means that we are just two weeks away from the completion of the Ham Exam Preparation Classes Session III. While the total student count is lower than in some prior classes with a combined total of fifteen students, these folks are every bit as enthusiastic as any that we have taught. Early indications via practice tests are very good, so I have pretty high hopes for successful exams across the board.

Interestingly enough, we also picked up some new Club members through the classes. On one recent Monday evening, we set out to get all of the Technician students their FRN's, which was no problem. However, that activity quickly led to also filling out Club membership applications. Gotta love it!

Every one of these classes is a learning experience for me as well as for the students, as I am always being reminded of some obscurity that I had overlooked or forgotten. However, it is often these obscure points that make a difference in one's understanding of radio circuits and physics. In any event, I would have to say that on balance I get as much as I give in these classes.

Finally, with the test and repair bench just about complete, it is time to start planning some educational events centered on the bench - specifically how to use some of the various test instruments and equipment housed there. Watch for some upcoming announcements about some test and repair bench familiarization and training sessions in the near future.

That just about does it for this month… see you all next time!

GCARC Amateur Radio Test Prep Class Schedule
2022 - 2023 Session IV
Class Times : 1800 - 2100 Hours
Weeks 1 through 8 + VE Testing Week

Class Week	Class Date	License Class Study
Week One	Monday, November 21, 2022	Technician Class
Week One	Tuesday, November 22, 2022	General Class
Week One	Friday, November 25, 2022	Amateur Extra Class
Week Two	Monday, November 28, 2022	Technician Class
Week Two	Tuesday, November 29, 2022	General Class
Week Two	Friday, December 2, 2022	Amateur Extra Class
Week Three	Monday, December 5, 2022	Technician Class
Week Three	Tuesday, December 6, 2022	General Class
Week Three	Friday, December 9, 2022	Amateur Extra Class
Week Four	Monday, December 12, 2022	Technician Class
Week Four	Tuesday, December 13, 2022	General Class
Week Four	Friday, December 16, 2022	Amateur Extra Class
Week Five	Monday, December 19, 2022	Technician Class
Week Five	Tuesday, December 20, 2022	General Class
Week Five	Friday, December 23, 2022	Amateur Extra Class
Week Six	Monday, January 2, 2023	Technician Class
Week Six	Tuesday, January 3, 2023	General Class
Week Six	Friday, January 6, 2023	Amateur Extra Class
Week Seven	Monday, January 9, 2023	Technician Class
Week Seven	Tuesday, January 10, 2023	General Class
Week Seven	Friday, January 13, 2023	Amateur Extra Class
Week Eight	Monday, January 16, 2023	Technician Class
Week Eight	Tuesday, January 17, 2023	General Class
Week Eight	Friday, January 20, 2023	Amateur Extra Class
VE Testing Session	Monday, January 23, 2023	Technician Class
VE Testing Session	Tuesday, January 24, 2023	General Class
VE Testing Session	Friday, January 27, 2023	Amateur Extra Class

HAM Operators Assisting The Red Cross During Disasters

October 18, 2022

Dear Fellow Amateur Radio Operators,

The American Red Cross (ARC) in New Jersey is working on a project where Amateur Radio Operators (HAMs) would support Red Cross internal emergency communications during a disaster. Red Cross sites can be shelters, warehouses, points of distribution, family reunification centers, community reception centers, and other sites where the Red Cross is supporting disaster response and recovery missions.

We are seeking HAMs to support these sites as a backup for conventional communications that may fail during a disaster. This work is in direct support of safety of life and protection of property (47 CFR § 97.403).

Currently, we are only looking for names of operators who would be interested in helping and their location within the state. The how will come after we know the who.

We are looking for HAMs to work as partners, either as an individual or with an organized group (club, ARES, RACES). We are not looking to take anyone away from their other committed roles, that they would perform for their communities.

We have split the state into three territories, North-Central-South, each containing seven counties, with communications being provided within the territories and the state.

The Red Cross will provide free disaster training to better understand what we are doing, as well as drills and exercises. Your commitment will be to attend training, drills, and exercises when you are able to and based on your ability to participate at the time that a disaster strikes. If you are interested in helping or learning more about this opportunity to use your amateur radio license in support of emergency communications in New Jersey, please fill out the form at the URL below.

73
ARC Assist Committee
Ed, K2BED
Mike, KC2UOA
Peter S, not yet licensed
Bill, NB1LL

Please copy and paste this URL to your browser to open the form :
https://forms.office.com/r/tqmB8cBV3F

Bill Kelly
Volunteer
American Red Cross, New Jersey Region
bill.kelly@redcross.org

Regional (Atlantic & Hudson Divisions) Hamfests & Events

November 13, 2022 : Long Island Mobile Amateur Radio Club, Long Island Hamfest and Electronics Fair, Levittown Hall, 201 Levittown Parkway, Hicksville, NY. **www.limarc.org**

November 19, 2022 : New Jersey Antique Radio Club, NJARC Fall Swap Meet and Hamfest, Parsippany PAL, 33 Baldwin Road, Parsippany, NJ. **www.njarc.org**

November 25, 2022 : Fair Lawn Amateur Radio Club, FLARC Auction, Fair Lawn Senior Center, 11-05 Gardiner Road, Fair Lawn, NJ. **www.fairlawnarc.org**

Tuesday
November 8, 2022

What A Ham Detected On VLF With Earth Probe Antenna!

By Jim Wright, N2GXJ

Every once and a while, something comes along in this hobby that just makes you stop for a moment and say what, you can do that? How about using ground spikes or underground antennas for LF and VLF reception. How's that?

I had no idea this was a thing, and that there are Facebook groups with over 1000 members (enthusiasts even) experimenting with such weird antennas. But there are! There are people out there chasing DX on low frequencies using the Earth's crust as part of a waveguide to detect distant transmitters. Check out **https://www.facebook.com/groups/earthprobes** and **https://www.facebook.com/groups/VLF.ULF.ELF**.

As quoted in an article posted at **https://www.rtl-sdr.com/building-an-underground-earth-probe-antenna-for-0-14-mhz-tx-rx**. "At first everyone made fun of me, the professionals called me crazy and today with more than seven hundred members, we installed underground antenna systems and the results are there"

What kind of results? Apparently, these ground spike and underground antenna designs have been around and have been studied for some time. And on October 9, 2022, a ham used receptions from his Earth probe antenna to confirm a gamma ray burst from outer space. How's that? **https://spaceweatherarchive.com/2022/10/17/powerful-gamma-ray-burst-made-currents-flow-in-the-earth**.

Question for readers of Crosstalk - have any of you experimented with Earth probe antennas, or done any DX yet on either of the far-below-HF 135kHz or 472kHz ham bands? I'd be interested in hearing about your experiences.

Fox Hunt XXV Summary
Sunday, September 25, 2022
By Jim Wright, N2GXJ

Our Club held a hidden transmitter Foxhunt on Sunday, September 25, 2022. It was a beautiful 70 degree sunny day, truly a great day to be out with the family, enjoying some fresh air and some radio sport!

Congratulations to Marc WM2Y and Rich KD2WDN who were first to find the transmitter! Hiding it this time was Frank N3PUU and his family, who chose to hide the transmitter in a drainage ditch on the edge of the WTCC Cricket Field in Washington Township, off of Johnson Road, in Gloucester County, NJ.

Though "out in the open", on the edge of a field, this turned out to be a rather challenging hunt. Making this somewhat more challenging than usual was the size of the hunt area (about 6 square miles), and the location of transmitter (below surrounding ground level). It turns out that the cricket field that the transmitter was located in lies in a valley, meaning the radio signals from the transmitter didn't get out much.

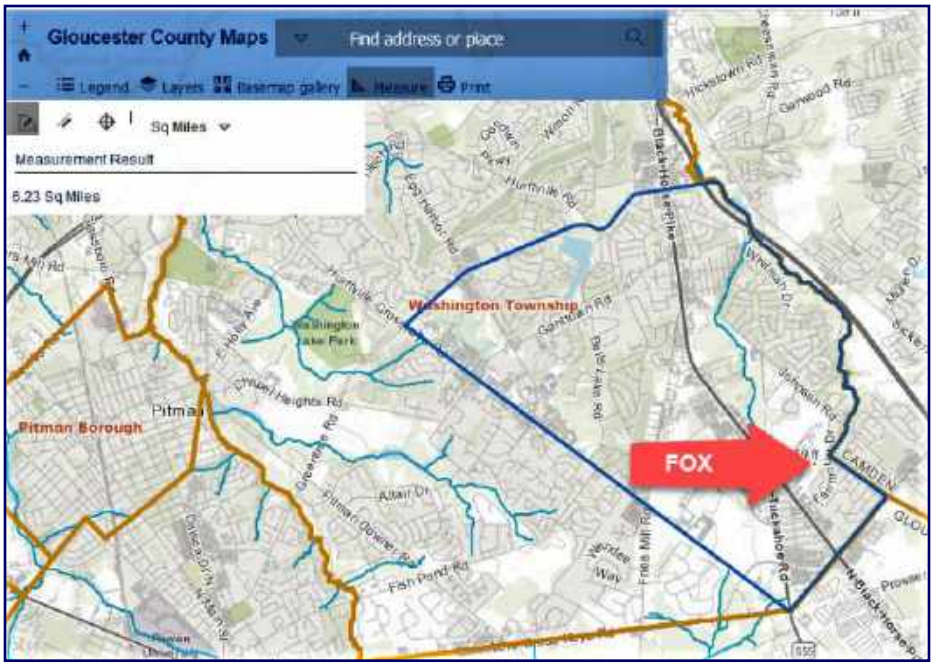
To illustrate the challenge, even with a Yagi out the roof of his wife's car, it took Jim N2GXJ and his wife about 20 minutes of driving just to get a first whiff on the radio of the transmitter's signal. Even after finding the cricket field, the challenge did not end then. Though Jim was first on site, he was still unable to find the transmitter in the ditch, assuming it was along the tree line ahead of him instead. Jim even got help from a passer-by cricket player (who just also happened to be a licensed ham), to help look for about 5 minutes, in an area that turned out to be within just a few yards of where the transmitter was located, without finding it.

It took Marc and his family coming on site, with his beam antenna and attenuator, to finally find it in the drainage ditch, to be able to claim first to find the transmitter! Shortly after, Al KB2AYU drove up on us in his truck. Out the window, he told us how he had not been able to hear the transmitter. In hind sight, maybe asking us to find a transmitter below ground level was a little aggressive. We'll make it easier next time!

Still, Marc did find it this time. And as he was first to find the transmitter this time, he gets to be the fox to hide the transmitter next time. That will probably be some time in November. Looking forward to that one! Care to join in? Please do! All are welcome!

(L-R) Jim N2GXJ; Frank N3PUU (The Fox) with XYL & son; Richard KD2WDN; Marc WM2Y; and Marc's Mother

Fox Hunt XXV Highlights



Fox hunt area map showing where the "Fox is located

Closer look at the "Fox"

In A Ditch! Are You Kidding Me!

In A Ditch For Sure!

The *"DigiNet"*
ZOOM Meeting

First & Third Mondays of the Month @ 2000 Hours
November 7 & 21, 2022

Current Training Class : FLDIGI, FLMSG, FLAMP
Go to : https://gloucestercountyarc.weebly.com/diginet.html
for FLDIGI Information Resources

Next Nets : December 5 & 19, 2022
Training Class : VARA (HF & FM)

Tuesday Noon Day 2M Rag Chew Net @ 1200 Hours
Net Control Hosts : Steve W2SEF, Chris AD2CS, & Mike KG4JYA
147.180 MHz Repeater & EchoLink - W2MMD-R
If you would like to be a control operator for this net, please contact Steve, W2SEF

Tuesday Night 10M Rag Chew Net @ 2000 Hours
Net Control Host : Jim Clark, KA2OSV
28.465 MHz or 28.475 MHz

Thursday Night 2 Meter Rag Chew Net
147.180 MHz Repeater
EchoLink : W2MMD-R
Every Thursday @ 2000 Hours

Here is the schedule for the upcoming weeks

Steve Farney, W2SEF : November 3, 2022
Gary Mirkin, WA3SVW : November 10, 2022
Mary Delemarre, W2TDS : November 17, 2022
Happy Thanksgiving : November 24, 2022

Steve Farney, W2SEF : December 1, 2022
Mary Delemarre, W2TDS : December 8, 2022
Chris Prioli, AD2CS : December 15, 2022
Gary Mirkin, WA3SVW : December 22, 2022
Greg Ciraula, W5DO : December 29, 2022

If anyone would like to be a net control operator, please notify **Jeff WB2ZBN**

Tower and antenna work party @ Darrell Neron, AB2E's QTH

Hams Doing What Hams Do!
Helping Each Other Out!

At a recent antenna work party at AB2E's QTH, Charlie N2SRQ, Ken KN2U, Frank N3PUU, Chris AD2CS, Tony K3TS, and Bill W0MHK, assisted Darrell with setting up a military mast and two antennas. After the mast was up, they noticed that the top mast and antennas were tilting and thought the rotator had broken. They lower it back down and it was just some loose hardware.
Successful operation and ready DX Season next Spring!

At The Repair Bench…

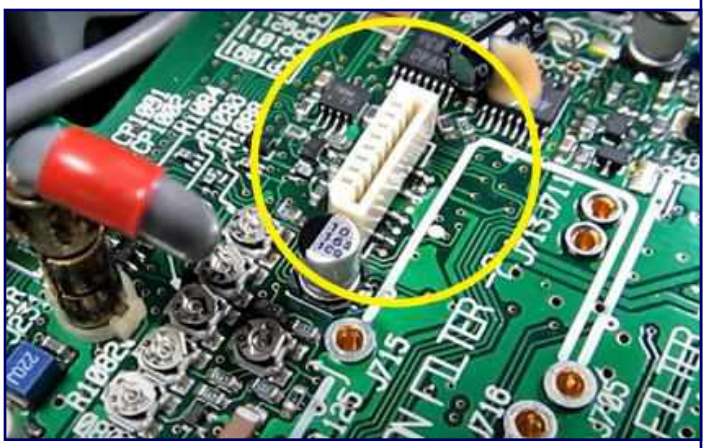
A monthly column describing a recent repair bench event.
By Chris Prioli AD2CS

Sometimes you wish that the customer would just be honest with you and tell you what really happened, and this month's At the Repair Bench is an example of one of those times. It all began with a phone call from a gentleman out in western Pennsylvania. I should have realized that something was wonky when he couldn't tell me who it was that referred him to me - or maybe he wouldn't say. Anyway, he asked if he could ship his faithful Icom® IC-706 to me for repair, saying only that the front panel was "dead". Naturally, I agreed to look at it, so he shipped it in.

He did an over-the-top job of packing the radio and mic, going so far as to buy some Lowe's sheet foam and cut custom blocks to surround the radio, and then gluing the blocks together to make two half shells that fit the radio quite well, and also fit the carton perfectly. Kudos on that part! He lost some points, however, when I got into the repair… but I am getting ahead of myself.

After unpacking the radio, I put it on the bench and connected it to my power supply and dummy load, and powered it on… or at least I tried to power it on. Nothing happened. The unit was stone cold dead and unresponsive. I took the cover screws out and lifted the top cover, and I saw immediately what the problem was.

The Icom® IC-706 has a removable front panel, which connects behind the panel to a set of eight spring contacts, which in turn connect to the main PCB via a "flex circuit" or Kapton cable. Connection to the main PCB is made through the use of a top-entry edge connector that is surface-mount soldered to the main PCB. This connector was off the PCB and floating free inside the radio, tethered to the end of the Kapton cable.



Here is the part where the owner lost points… someone had been inside the radio and most likely pulled that connector off the board. How do I know this? Simple… the speaker connection (the speaker is mounted to the top cover) was unplugged.

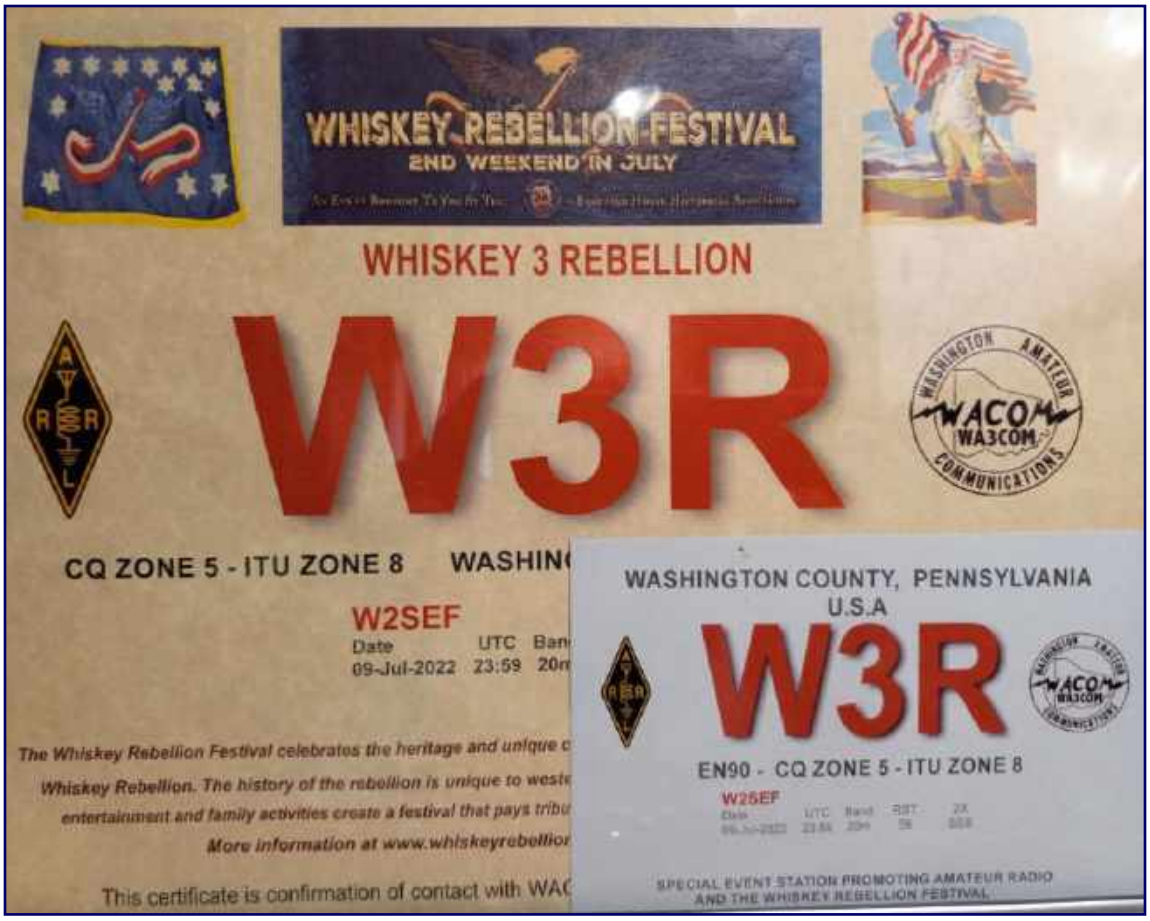
At The Repair Bench - Continued on page 18

At The Repair Bench - Continued from page 17

The repair was simple enough. Fortunately, no damage was done to the PCB - all of the pads were intact and in fact had plenty of solder on them. All I had to do was to reflow the solder on the connector pins once I put the connector in position. Of course, I had to remove the FL-100 CW Narrow Filter and the FL-223 SSB Narrow Filter to allow clear work access to the connector location on the PCB. The Kapton cable itself was unhurt, so after I resoldered the connector in place, I was able to simply re-insert the Kapton cable into the connector slot.

Was it embarrassment? Was it ignorance? Who knows? All that I know is that the radio performed properly once the repair was made, and I repeated the inbound packing job for the outbound trip back to the owner. A simple repair with a nebulous cause… but one thing is certain. That connector most likely did not fall off by itself.

I would much rather have the customer tell me the truth as to what is going on when a unit comes in for repair, as it takes a lot of the guesswork out of the equation. See you next month!



GIVING TUESDAY

Tuesday, November 29, 2022

One Saturday Morning…

By Chris Prioli, AD2CS

On a recent Saturday morning, the new test and repair bench at the W2MMD Clubhouse got some use by a relative novice at cable assembly. It all started the night before, when Alex Rodriguez KE2AAK, a relatively new Club member and student in the Amateur Extra class, happened to mention that he needed to make up a couple of coaxial cables from the supplies that he had purchased. I suggested that he come in the next morning, a Saturday, and assemble his cables at the Clubhouse.

Alex had ordered about a hundred feet of RG-213U coaxial cable and a set of twenty-four crimp/solder PL-259 connectors from DX Engineering (DXE). He had little or no experience in assembling these cables, but using the tools and equipment available on the Clubhouse test and repair bench, he was able to successfully assemble his coaxial cables under my direction. Also participating for the learning experience was Earl Moore KC2NCH.

Among the tools on the bench are a DXE coaxial cable gripper and a DXE coaxial cable stripper, both appropriately sized for the RG-213U cable, as well as cable cutting pliers and cable trimmer pliers. Of course, the tool complement also includes a DXE coaxial cable crimper with the die set for the RG-8U and RG-213U cables. The final piece of equipment necessary was the solder station, useful for soldering the PL-259 center pins.

With all of the needed tools and equipment on hand, we set out to teach Alex and Earl how to install the PL-259 connectors to the cable. The DXE cable gripper and stripper make short work of preparing the cable, stripping exactly the correct length of outer jacket, shield braid, and dielectric in two easy steps. Step one is to insert the cable into the "slicing" end of the stripper, and then squeezing the stripper closed while rotating it around the cable a couple of turns… until the sound of cutting cable ceases. Step two is to open the stripper tool and reverse it end-for-end on the cable, placing the cable into the "slitting" end of the tool. Then, while squeezing the stripper tool tightly closed and holding the cable securely with your other hand, simply pull the stripper tool straight off the end of the cable, taking the proper lengths of insulation, braid, and dielectric off cleanly.

With the cable end prepared, it is a simple matter to install the connector. Start by slipping the connector nut onto the cable, closed end first. Next, slip a connector ferrule onto the cable, and then peel off the remaining strip of outer jacket left behind by the stripper tool. This strip of jacket will already be slit and will come off very easily. Continue by slipping the connector body onto the end of the cable, inserting the center conductor into the connector pin and working the connector body tube under the exposed shield braid, pushing it gently as far as it will go to bring it up against the cable body. Note… DO NOT twist the connector into place, as doing so can cut the shield braid wires. Push the ferrule up along the cable to the connector body, slipping it up and over the shield braid. Then, using the appropriate crimping tool with the proper die set installed, crimp the ferrule tightly to the cable and connector body. Finish the installation by soldering the center pin to the center conductor of the coax, working inside the center pin tube only, being careful to avoid getting any solder onto the outside of the center pin. Clean off any rosin on the outside of the center pin for best connectivity and a professional finish. Repeat the process on the opposite end of the cable, and then check the cable for continuity and shorts with an ohmmeter. A properly assembled cable will show a direct connection from center pin to center pin, and no connection from the center pin to the connector body or shell.

One Saturday Morning - Continued on page 20

One Saturday Morning - Continued from page 19

Alex and Earl each installed a couple of connectors, including soldering the center pins using the Yihua 948-II solder station on the test and repair bench. The cables tested out correctly when measured using the Greenlee DM-510A handheld DVOM, also on the test and repair bench. Are we sensing a theme here yet? Let me spell it out… with the cable and connectors supplied by Alex, everything else needed to assemble the coaxial cables is available right there in the Clubhouse for all members to use! All that we ask is that you get "Elmered" on the tools and equipment if you are not already well experienced with them, both for your own safety and to prolong the service life of the tools and equipment.

The story is not over yet. Alex also had brought with him a power cable for his home radio, consisting of separate red and black wires about twelve feet long each with a four-pin Molex® plug at one end, and a pair of fuse holders near the opposite end, which had about an inch of insulation removed from each wire to accommodate being wrapped around the power output studs on his power supply. His power supply, however, also has Anderson Powerpole® connections available, which is what Alex really wanted to use. To that end, he had purchased a small quantity of 30 ampere rated Powerpole® terminals and some connector bodies.

We improved his power cable by taking out about six feet or so of length and installing the Powerpole® termination that he wanted. Of course, Alex had provided the connector supplies, not knowing that the necessary parts are stocked on the test and repair bench. Equally important, however, is the fact that the test and repair bench is also equipped with a proper Powerpole® crimper tool, which was needed to install his connectors.

We used some large-diameter heat shrink tube pieces to tie the red and black wires together at several points along their length. We also spliced the wires where we had cut out the excess length, properly soldering the splices and covering them with heat shrink tube as well. Shrinking the heat shrink tube sections was a breeze, literally, using the hot air supplied by the hot air reflow wand on the solder station. The heat shrink tube lengths are stocked on the test and repair bench.

The point of all of this is that this bench is really and truly well-equipped and supplied with the most common consumables used in our hobby. Come on out to the Clubhouse and check it out - and plan on using it for your next upgrade, repair, or modification task. After all… it belongs to all of us!

Gary WA3SVW and XYL Anne with their Chevrolet Bolt at a recent Atlantic County Utilities Authority's Annual Electric Vehicle Showcase featuring electric cars, trucks, and motorcycles.

https://bit.ly/3TWKeFn

2022 Clubhouse Projects - We Will Rebuild Back Better

Shed :

- **Install Electrical Wiring**
- **Install Lights**
- **Build Ramp**

Painting :

- **Back Steps**
- **Power Pole**

Replace Front Inside Door

Lightning Protection Project :

- **Install copper strapping in Library Room**
- **Install copper strapping in VHF/UHF Room**
- **Complete grounding rod installation around Clubhouse and Towers**

Replace Interior Front Door

HF Tower :

- **Finish installing new tower**
- **Finish installing new antenna**

VHF/UHF Tower :

- **Repair / Replace tower**
- **Repair / Replace antennas**

A club exists to go above and beyond for their communities and for Amateur Radio is what defines an ARRL Special Service Club (SSC).

They are the leaders in their Amateur Radio communities who provide active training classes, publicity programs, and actively pursue technical projects and operating activities.

GCARC has been an ARRL Affiliated Club since February 1960 and an SSC since April 2010.

Basic Troubleshooting of Electronic Devices and Equipment - Part Three

By Chris Prioli, AD2CS

A third diagram type is the ***device wiring diagram*** that depicts the physical connections between the various circuit boards and the off-board components of the equipment. These diagrams will often include such information as wire color, plug types, and plug locations.

The fourth diagram type is the ***block diagram*** already mentioned. In terms of a further discussion of the block diagram, it must be understood that these diagrams indicate the ***logical*** breakdown of the equipment into operational stages or sections. These stages may be all or in part on a single circuit board, or they may be physically located across multiple boards. The diagram indicates the key signal paths through the equipment, and will usually show the various stages or features that process the signals in some manner. These stages or features can include oscillators, mixers, amplifiers, detectors, filters, and so forth.

Some time spent in studying the various diagrams will go a long way towards building an understanding of the operation of the circuits at hand, and can also reduce the actual diagnosis and repair time because of that increased understanding. For example, and going back to our earlier example of a dead 3.3V supply, simply understanding the voltage development process and the locations of the involved components will make it easier to go right to that physical portion of the device and identify those components. From there, some basic voltage and resistance measurements will aid in the final fault diagnosis.

If you get confused or simply do not understand the operation of a given circuit, ask somebody! There are numerous help sources available online. Almost any common equipment type will usually have a user's group established somewhere, with a web presence and usually with a chat or forum structure wherein questions and answers can be exchanged. However, I will caution the reader against a common ploy that is found very often on the web, wherein a student is asking for the answer to a school assignment. If you are a student, get help with the understanding, but do your own work! If you are a ham or a hobbyist, make that status known when asking the questions that you have. The more completely you can explain the problem, including the results of any diagnostic measurements made, the more likely it is that you will get a useful response.

Most amateur radio clubs will have a list of club "Elmers" who are available and willing to help a neophyte with almost any aspect of amateur radio, including electronic troubleshooting or diagnosis.

Often, the Internet can also be a huge help in identifying and resolving failures that have turned out to be common or endemic issues. One such case is the experience that I had with a Yaesu FT-736R base station transceiver. This unit has an integrated FP-1274A 120VAC to 13.8VDC power supply unit installed to its chassis. The power supply plugs into the main radio chassis via a six-pin Molex® plug carrying two red wires and two black wires. Upon receipt in the shop, the unit was completely dead - no response of any kind at all at all when the power switch was turned on. The radio was marked as taking a 13.8VDC input there, so I unplugged the built-in power supply unit and connected a bench power supply. On activation of the power switch, the radio came alive and everything worked as it should. Obviously, then, the integrated power supply unit had failed. I removed the PSU from the main chassis and removed its cover. Immediately noticeable was a darkened area on the printed circuit board (PCB). A closer look at that area showed that there were two 33-ohm two-watt resistors (R17 and R18) at that location. OK - so the PCB got hot enough to discolor it quite a bit. What else might have been heat-damaged as well? In the immediate vicinity was a couple of aluminum electrolytic capacitors. Actually, there are four of them in near proximity, but two of them - C8 (56µF/50V) and C9 (220µ/16V) are really close. I decided to start there, so I de-soldered and removed those

Basic Troubleshooting - Continued on page 23

Basic Troubleshooting - Continued from page 22
two capacitors. A quick capacitance test showed that the 56µF capacitor was down to 4µF, and the 220µF one was down to about 25µF. They obviously had to go, and there was no sense in even measuring their ESR's. Just for assurance purposes, I removed and tested the other nearby electrolytics, which were C12 (1µF/50V) and C22 (1,000µF/25V). They both tested well within capacitance tolerances for ±20% capacitors, and their ESR's were extremely low. Testing them with my capacitor leakage tester revealed no leakage to be concerned about. (There is almost always some leakage, especially in electrolytics, but these were well within acceptable limits.)

The net result was the replacement of two capacitors, C8 and C9, with 105°C versions of identical capacitance ratings as the originals. For the 220µF capacitor, I had a 35V type on hand, so I used that instead of sourcing a 16V device for this job. The 35V capacitor was slightly longer in length than the original 16V one, but it was the same diameter, so original inter-component spacing was maintained. Replacement of the capacitors repaired the PSU. It was closed up and installed back into the radio, where it was connected and tested with positive results.

This repair illustrates the value of observation and critical thinking in the troubleshooting process. The use of test equipment was simply to verify the conclusions drawn through that observation and the associated thought processes. The testing of the additional two capacitors was a means of ensuring that there would not be a need to disassemble the PSU a second time.

One other thing about the Yaesu FT-736R repair. I used the term ***"endemic"*** earlier in reference to certain repairs. This repair is one of those endemic types. It affects many radios out there, making it almost a no-brainer when one of these comes in dead. Chances are good that this frequent failure will be at the root of the problem with a good number of these sets. As I learned afterwards, it is common-enough of a problem that there have been a few pieces written and posted online about it. Had I looked online first, I might have found one of those articles and learned about the failure that way instead.

Back to the list again…

23. Make sure that you find the ***cause*** of a failure, ***not just the symptoms of it!*** Sometimes, an active component will be discovered early on. The technician will replace that failed active device, believing that the problem is fixed. The unit gets returned to service, and a short time later it is back, this time for repair at no charge to the customer! "Why so?" you ask. It is really quite simple. The failed active device - say maybe a transistor - was a ***symptom*** of the failure rather than being the failure in and of itself. So… what caused the transistor to fail? Picture a circuit where a transistor is being used as a switch to control the activation of a relay - maybe the relay used as a T/R switch in a ham radio transceiver. That relay, as many do when installed in similar circuits, has a diode installed across its coil. The diode is there for spike suppression when the relay coil is de-energized. It is placed in circuit in a reverse direction, such that no current flows through the diode under normal circumstances, but whenever the transistor goes into cutoff and turns the relay coil current off, the magnetic field created by the normal coil current collapses, inducing a reverse spike in the coil winding. The spike suppression diode shorts the coil's ends to each other when that reverse spike current flows, effectively cancelling the spike within the coil itself and preventing the current from getting to the transistor. But… what happens if the diode (or diode circuit) fails open? It would not be evident at all during normal operation, but at transistor cutoff, when the spike occurs, there is no longer a working diode there to suppress that spike. This allows the spike to travel back to the transistor, often destroying the transistor in the process. Thus, a failed transistor that is symptomatic of the actual failure, but is ***not*** the root cause of the failure at all. It should be noted that it

Basic Troubleshooting - Continued on page 24

Basic Troubleshooting - Continued from page 23

may not be the first or even the tenth or twentieth spike that finally cooks the transistor, but eventually, it happens. It is far more likely to cause a failure if there are multiple spikes in rapid succession, as when the mic is keyed and released several times.

24. If two or more seemingly unrelated systems fail simultaneously, look for something that is common to all of those systems which, if failed, would in turn cause the concurrent failure of those "unrelated" circuits. An example can be found in the Velleman K8115 component tester discussed earlier. Failure of the 3.3V voltage regulator will take out the display and the CD4050B non-inverting hex buffer. The display failure would be obviously evident; the CD4050B failure would require some further investigation to substantiate. However, a simple voltage measurement would reveal the lack of the 3.3V supply to either the display board or to the CD4050B IC. A quick peek at the schematic would show that the only other component on the 3.3V rail is a 1µF electrolytic capacitor at the output of the 3.3V voltage regulator. Therefore, a dead 3.3V rail has one of three possible causes… a shorted 1µF capacitor as above, a failed voltage regulator IC, or a loss of the 5VDC rail input into the 3.3V voltage regulator. Aren't schematic diagrams just great?

Time for another repair case history, this time with a CONAR Model 255 6MHz Analog Oscilloscope. This is a kit-built solid-state oscilloscope from the mid- to late-1970's, that uses a CRT. The unit had worked well for many years before suddenly failing. The failure indication was a lack of the oscilloscope trace on-screen, though the front panel pilot lamp, a neon tube, illuminated on power-on. There are no other power indicators available to the user, and in fact, the only other positive indication of power being present at all was the illumination of the CRT heater. Unfortunately, the only thing that these two illuminations told me were that the power cord and switch were good, as evidenced by the neon tube across the switched line cord, and that the power transformer was operable to some extent, as the filament voltage is drawn from a dedicated secondary winding on the power transformer. This meant that some exploration was in order.

Apart from the high voltages used in the horizontal and vertical deflection circuits, the only voltages produced by the power supply section of this unit are +5VDC and -5VDC, which are derived from the +12VDC and -12VDC outputs produced from a full-wave rectified AC source obtained from a secondary winding on the main power transformer. The -5VDC supply and +5VDC supply were both found to be dead. Upon investigation, the +12VDC and the -12VDC sources were approximately correct, if slightly off at +13.1 volts and -12.8 volts respectively. A few words about the power supply design are required at this point. The -5VDC supply is designed to track the +5VDC supply, being equal but opposite in polarity to the output voltage of the +5VDC supply. Because of the fact that the positive and negative twelve-volt sources were approximately correct, and because of the low probability that both five-volt supplies had failed, I decided to start with the +5VDC supply. The +5VDC is produced via a standard LM7805 three-pin 1.5A fixed voltage regulator IC (IC6) fed by the +12VDC source described above. Pin 1 of the LM7805 is the input pin, pin 2 is the output pin, and pin 3 is a ground pin. Connected directly to the LM7805 output at pin 2 is a 1µF electrolytic capacitor (C52), and also a test point, TP1. The voltage at TP1, of course, measured 0.01 volts… nominally zero volts. With the oscilloscope powered down and after short wait, a resistance reading was taken from TP1 to chassis ground, which indicated a direct short circuit to ground.

Because of the age of the oscilloscope and the fact that capacitor C52 was apparently an original part, I decided to start with it, and thus removed it from the circuit. Repeating the earlier TP1-to-ground resistance measurement with the capacitor out of circuit, a reading of about 180 ohms was obtained. I installed a replacement capacitor at the C52 location and checked the circuit operation, and found all to be well.
The oscilloscope operated normally in every regard… almost. I noticed that the beam trace was a little bit wide and slightly unfocused. Some additional repairs were necessary to bring the unit back to top condition.

Basic Troubleshooting - Continued on page 25

Basic Troubleshooting - Continued from page 24

Before going any further, however, I began by replacing the +5VDC voltage regulator IC6 as a prophylactive measure against potential early failure. This IC, the LM7805, is designed with short-circuit or overload protection and in theory should have been suitable for continued use, but I was there and the part cost is a mere fifty-nine cents.

Now let's continue with the other repairs to the oscilloscope. All of the capacitors in this unit except the main filter capacitor were original parts some fifty-five years later. Many of them, especially the electrolytics, were undoubtedly showing signs of (internal) current leakage. I decided to re-cap the entire oscilloscope. I left the mica and ceramic disc capacitors alone (with one exception), but replaced all of the tantalum, aluminum electrolytic, Mylar and poly film capacitors. The excepted disc capacitor that I replaced was a 0.01µF 1.4kV disc that was installed across the line cord. I replaced this with a modern 0.1µF X1/Y2 safety capacitor. Safety capacitors are designed to only fail open-circuit, not short-circuit, and are made specifically for line suppression use. This amounted to a total of eighteen discrete capacitors (one poly film, five Mylar, six tantalum, and five aluminum electrolytics, plus the safety capacitor) in addition to the two-section 30µF/30µF x 350V electrolytic filter can capacitor. Replacing the capacitors restored the nice crisp and narrow beam trace. I then performed a calibration in accordance with the original build manual for the unit, cleaned the graticule and CRT face, and cleaned all controls and switches with DeoxIT®, which brought the unit into top condition again.

The owner of this oscilloscope was rather pleased when she saw the operational condition of the unit. She had gotten used to the wide, fuzzy trace over time and had not realized just how bad it really was until she saw the "new" look of her old bench top tool.

This repair highlights the endgame of all troubleshooting jobs - the eventual and final repairs to the failed unit. In most cases, it is not enough to simply replace the failed part. A good technician will go the extra mile to clean the unit as necessary to ensure that the entire unit can be examined for evidence or indications of failure, either current or imminent. It is then incumbent upon that technician to do what is possible to mitigate the imminent failures, thus preventing as many of them as possible. Now I am not suggesting that every unit brought in for a minor repair should be renovated or refurbished, but at the same time, anything leaving your shop should look as if somebody spent some careful time and attention on that unit. I maintain that it is nearly impossible to do a thorough inspection of a PCB that is covered in dust.

OK - so you have made the repairs deemed necessary based upon your troubleshooting and diagnosis, supplemented by circuit testing and evaluation. Is the unit ready to go back into service? Maybe… but then again, maybe not! Before returning the unit to service, test its operation in all modes offered, and to the maximum degree practical with the test equipment available. The average technician is not expected to have a service monitor or a full complement of test equipment, but do what you can do to assure yourself that the problem has truly been located and repaired.

Make every attempt to verify that you have truly located the real source of the failure and not just the gross symptoms of a more insidious failure that can continue to do further damage.

Part Four of Basic Troubleshooting of Electronic Devices and Equipment will be in the December 2022 CrossTalk

The full version of this four part article is available for download on the Repair Bench web page : https://gloucestercountyarc.weebly.com/repair-bench.html

W2MMD Clubhouse Test & Repair Bench Equipment and Supplies

A Special Thank You to Chris AD2CS for donating the equipment and organizing these test benches

- YiHua 948 11-in-1 Solder Station
- Universal Screwdriver Set
- PanaVise PCB vise with full tilt and rotate on parts bin base
- 500 Watt Dummy Load
- 100 Watt Dummy Load
- Heathkit HD-1234 6-position Coax Switch with RG-213 jumpers
- Hook-up Wire :
  - 18 AWG stranded
  - 22 AWG solid and stranded
  - 24 AWG solid and stranded
- Bird 4304A Thruline Directional Wattmeter
- CMS BE-01 Battery Eliminator 1A/1.5-15V Power Supply
- 12 AWG Red/Black Dual Stranded ZIP Wire
- Simpson 260 Series 5 Analog Multimeter
- CMS ESR-01 Equivalent Series Resistance Meter
- Elenco DT-100 Diode & Transistor Tester
- TekPower TP50SW 50A/13.8V Power Supply
- Elenco XP-720 12.6VAC/5VDC/1.5-15VDC 3A/1A Power Supply
- RSR Electronix Express RSR-3040 15VAC/5VD/1.5-15VDC 3A/1A Power Supply
- BK Precision 1803D Frequency Counter
- KKmoon MHS-5225 Digital Arbitrary Waveform Signal Generator
- Exact 121 Analog Signal Generator
- Greenlee DM-510A Handheld Digital Multimeter
- HP 34410A Benchtop Digital Multimeter
- BK Precision 1655 Variable isolated AC Supply
- CMS Dim Bulb Current Limiter - 100 Watt
- CMS BDST-01 Signal Tracer
- CMS CRTT-01 Gas-charged Voltage Regulator Tube Tester
- Conar 224 Tube Tester
- GW LCR-814 LCR Meter
- Siglent SDS-1102CML+ Digital Storage Oscilloscope
- DX Engineering Coaxial Cable Gripper and Stripper (RG-8U / RG-213)
- DX Engineering Coaxial Cable Cutter, Trimmer, and Crimper (RG-8U / RG-213)
- DX Engineering RG-8X Die Set for Coaxial Cable Crimper
- Adjustable Wrench Set for Slotted/Recessed Round Nuts
- Speedwox Miniature Box Wrench Sets, Metric and SAE
- 69238 Nut Driver Set, Metric
- 69239 Nut Driver Set, SAE
- Velleman K-8115 Universal Component Tester
- Anderson Powerpole® Connector Assortment
- Anderson Powerpole® Crimping Tool
- Heat Shrink Tube Assortment, cut lengths
- Ring Terminal Assortment
- Alignment Tool Set
- Craftsman Wire Cutter/Crimper
- Craftsman 6-piece Pliers Set
- Laptop PC
- Programming Cable Sets (2)
- Test Lead Set
- Oscilloscope Probe Set

ARRL Southern New Jersey Section Completes Simulated Emergency Test

During the rainy and windy Saturday morning of October 1st about 91 amateur radio operators, sometimes referred to as HAMS, in Burlington, Camden, Cumberland, Gloucester, Mercer, Ocean, and Salem Counties participated in a National Simulated Emergency Test, sometimes referred to as a DRILL or EXERCISE. The annual Simulated Emergency Test is promoted by the ARRL - The National Association for Amateur Radio while design of this exercise was accomplished locally by the Southern New Jersey Section of the ARRL under the leadership of Section Manager, Tom Preiser N2XW of Manahawkin.

Throughout the simulated exercise the Amateur Radio Emergency Services (ARES) teams of licensed radio operators volunteered their time and personal equipment to practice providing backup emergency communications for served agencies. The DRILL participants in the 7 counties responded to a simulation that a duplicated series of severe weather events passing through Southern New Jersey. It was designed to be the same as a normal storm front which impacts different areas at different times with different conditions. This DRILL simulated disruptions of all electrical power, internet, and cellular services, forcing the amateur radio emergency service operators to only use radio frequencies for communications. In addition, the local teams did not know the weather conditions their county or group of counties were going to receive. However, teams had to monitor the Southern New Jersey Section Message/Traffic Network or a backup network for "Inject Incident Messages" containing the information. The Southern New Jersey Section Message/Traffic Network simulated the National Weather Service watches and warnings. The 11 "Inject Incident Messages requests the 7 county teams to react to simulated high winds, flooding, tornadoes, water spouts, and derechos, plus how these weather events impacted communities.

During the morning simulation, the seven county teams plus the Southern New Jersey Section Traffic Network Station and its backup processed over 280 messages, using both voice and digital communications modes. Some required providing severe weather reports to the National Weather Service. Others simulated sending and receiving messages for shelters that had to be established due to barrier island and coastal or river flooding. A third simulation was to provide local emergency management authorities with damage assessment reports, such as flooding, and blocked roads. The simulation requested all teams and network operators to utilize Federal Emergency Management Agency (FEMA) recommended logging and message forms, which would be requested by served agencies in an actual emergency.

An added challenge was the effects of Hurricane Ian's remnants, rain, high winds, and flooding, occurring throughout the event. While adding realism, it required all teams and Section leadership to constantly monitor the need to shift from DRILL to higher status making reports to local NWS office by our SKYWARN volunteers and local served agencies.

The National Simulated Emergency Test goals focus on identification of strengths in emergency communications skills, as well as identify areas for improvement of the teams in Southern New Jersey. According to preliminary results this Southern New Jersey Simulated exercise achieved those goals. Several debriefing reports from teams stated, 'the simulated emergency test was fun while challenging'. These debriefs suggested enhancements in operating procedures, additional training in digital message handling to improve accuracy, and technical ideas to research to upgrade radio networks. Efforts have already started on enhancing future operations.

Article Credit : ARRL Southern New Jersey Section for Ham Radio Facebook page, October 11, 2022
(https://www.facebook.com/arrl.southernnj)

AMSAT Outlines Tracking for Artemis I Moon Mission using "Welcome" Beacons

When NASA's Artemis I rocket launches for its mission to the moon, you'll be able to track it using 70-centimeter beacons known as Outstanding MOon exploration TEchnologies demonstrated by NAno Semi-Hard Impactors (OMOTENASHIs).

Omotenashi is Japanese for welcome or hospitality, and it describes the 70-centimeter beacons as small spacecraft and semi-hard landers of the **6U CubeSat (https://en.wikipedia.org/wiki/CubeSat)** format which will demonstrate low-cost technology to land and explore the lunar surface. OMOTENASHI will be one of 10 CubeSats to be carried with the Artemis I mission.

Brian Wilkins, KO4AQF, says that with the Artemis Real-time Orbit Website (AROW), anyone with internet access can pinpoint where Orion is and track its distance from the Earth, its distance from the moon, the mission duration, and more. AROW is available on **NASA's (https://www.nasa.gov/feature/track-nasa-s-artemis-i-mission-in-real-time)** website and Twitter account. AROW visualizes data collected by sensors on Orion that are sent to the Johnson Space Center's Mission Control Center in Houston during its flight. It will provide periodic real-time data beginning about 1 minute after liftoff through the separation of the Space Launch System (SLS) rocket's Interim Cryogenic Propulsion Stage, approximately 2 hours into flight.

Once Orion is flying on its own, AROW will provide constant real-time information. On the web, users can follow AROW to see where Orion is in relation to the Earth and the moon, and follow Orion's path during the mission. Users can view key mission milestones and characteristics on the moon, including information about landing sites from the Apollo program. Also available for download will be an ephemeris, which provides trajectory data from the flight.

AROW will also provide a set of Orion's state vectors - data that describes precisely where Orion is in space and how it moves - for inclusion in these tweets once Orion is flying on its own. These vectors can be used for data lovers, artists, and creatives to make their own tracking app, data visualization, or anything else they envision. For more information, read **https://www.nasa.gov/feature/track-nasa-s-artemis-i-mission-in-real-time**.

AMSAT member Joe Fitzgerald, KM1P, adds a second online tool, called Horizons. The JPL Horizons online solar system data and computation service provides access to key solar system data and flexible production of highly accurate locations for solar system objects such as asteroids, planetary satellites, planets, the Sun, and select spacecraft. Horizons is provided by the Solar System Dynamics Group of the Jet Propulsion Laboratory.

Fitzgerald says to use "OMOTENASHI" as the Target Body. You can find information and the online app at : **https://ssd.jpl.nasa.gov/horizons**.

Thanks to Brian Wilkins, KO4AQF; Joe Fitzgerald, KM1P; NASA; JPL Horizons, and AMSAT.

Article Credit : The ARRL Letter of September 8, 2022 - www.arrl.org

Editor's Note : Artemis I is scheduled for launch on November 14, 2022

QST de W1AW
Special Bulletin 10 ARLX010
From ARRL Headquarters
Newington CT October 4, 2022
To all radio amateurs

ARLX010 Doreen Bogdan-Martin, KD2JTX, is Elected as Next ITU Secretary General

The International Telecommunication Union (ITU), the United Nations specialized agency for information and communication technologies, has announced the election of Doreen Bogdan-Martin of the United States of America as the next ITU Secretary-General. Bogdan-Martin will assume office on January 1, 2023. She is a radio amateur and holds the call sign KD2JTX.

The election took place during ITU's Plenipotentiary Conference (PP-22) in Bucharest, Romania, on Thursday, September 29, 2022. Bogdan-Martin won the position with 139 votes, out of 172 votes cast by representatives of Member States.

You can read the ITU press release here : **https://www.itu.int/en/mediacentre/Pages/PR-2022-09-29-ITU-SG-elected-Doreen-Bogdan-Martin.aspx**

"This is an exciting development for ITU," said International Amateur Radio Union (IARU) President Tim Ellam, VE6SH. "...she will be the first female SG [Secretary General] and only the third to hold an amateur license. Doreen has an exciting agenda for ITU."

The US Department of State has published a statement from Bogdan-Martin, as well as her biography, and vision.

"She will make an outstanding ITU Secretary-General and one IARU will be proud to work with on behalf of the Amateur Services," said Ellam.

Editor's Note : Doreen Bogdan-Martin, KD2JTX, Technician Class, is from Spring Lake, Monmouth County, NJ.

ZERO PROSTATE CANCER RUN/WALK

South Jersey Run/Walk
Sunday, November 6, 2022

https://bit.ly/3zhUkJf

GCARC Field Trip to the RCA Heritage Museum at Rowan University

1909 Victor Talking Machine

1925 Battery Powered Radiola

Thank you to Club member Anthony Cerami, N2OAC, who arranged the tour of the museum

Thank you to Club members Anthony Cerami N2OAC and Sheldon Parker K2MEN for the pictures

More pictures on the Tech Saturday Forum web page

Victor Talking Machine Co.

1901-1929 The Early Years – Where it all Began

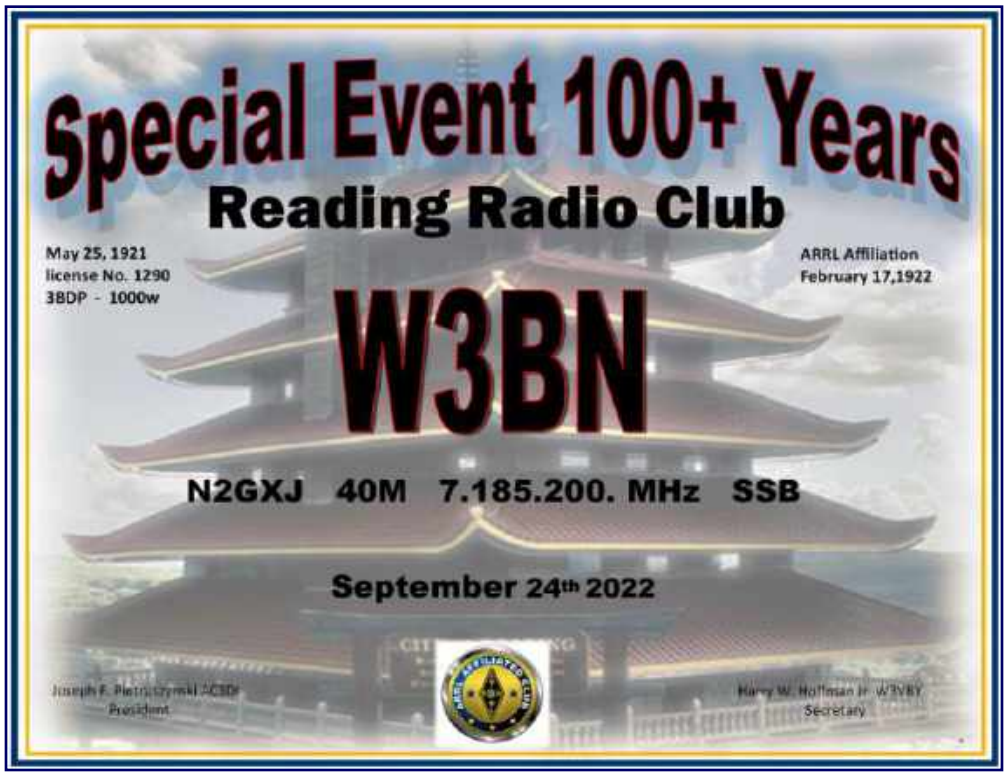
Camden, NJ

In 1901, the Victor Talking Machine Company (VTMC) is incorporated with Eldridge Johnson as President with a Design & Manufacturing office and shop on North Front St. in Camden and a Sales office at Berliner Gramophones in Philadelphia. Johnson combines his patents with Emile Berliner Gramophones and comes out with a line of Victor Talking Machines which would transform the world.

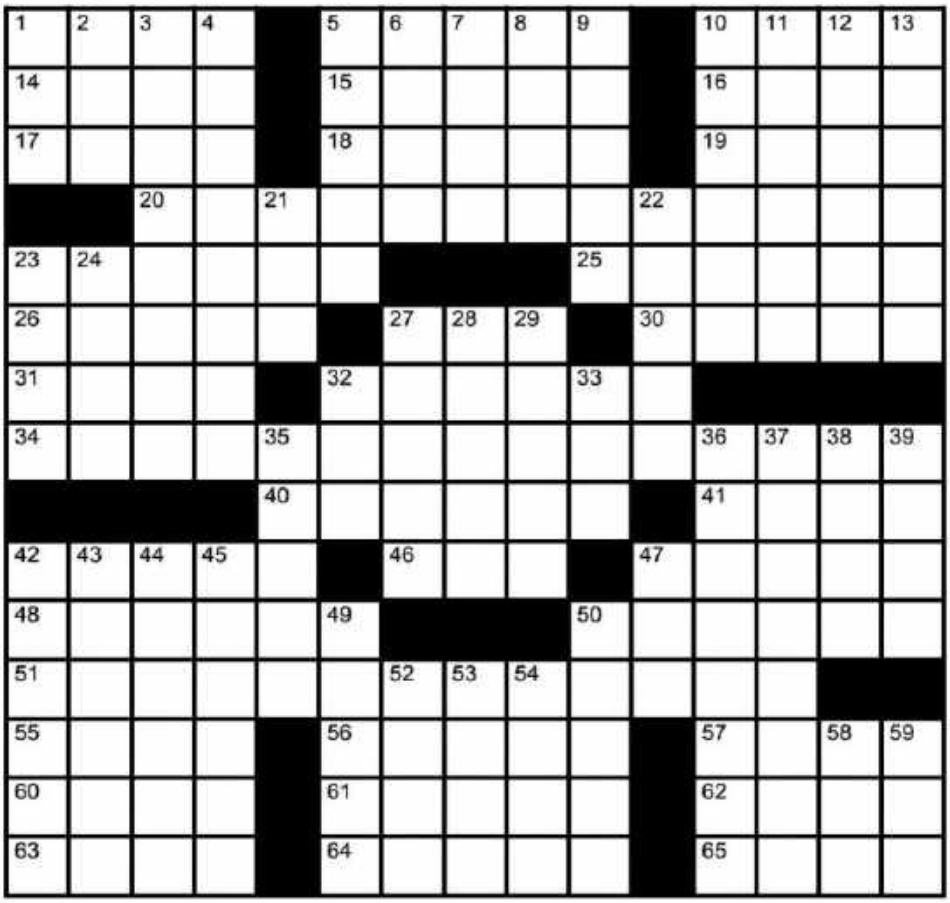
The Victor company experiences tremendous growth over the next two decades consolidating all operations in Camden with expansion from Johnson's original 800 sqft machine shop on Front St. to a sprawling 58 acre complex on the Camden waterfront with over 30 buildings, including its own coal wharf and power plant, railroad system, printing plant, hospital, restaurant, and the largest lumberyard in the world with over 10,000 employees.

The company's tremendous success is driven by significant technical firsts and achievements in recording and playback technology, a strategy to sign the biggest opera and other musical stars to exclusive recording contracts, and an extensive marketing, dealership and service organization with dealerships around the globe.

By 1929, VTMC had amassed over $700,000,000 in sales from Victrolas, Radiolas, Records, Parts & Services, and "His Master's Voice" is the most recognized logo in the world.



DXpedition Ditties



Crossword Puzzle courtesy of https://www.w2pa.com/Home/articles/crossword-puzzles

Across

1. Call heard during November

5. Bygone

10. CQ DX ____ of fame

14. "Hurry!"

15. Deleted HK0 last name

16. Hebrew month

17. Org. not for OMs

18. Less inept

19. KH6 root

20. VP6 air space?

23. News manager

25. Listened attentively

26. The missing ones for your DXCC #1, say

27. Suffix with MOS or J

30. Engine sounds

31. W8 - VE3 separator

32. Provides weapons again

34. What it costs to get to BS7?

40. Less fat

41. Three-ply cookie

42. Kind of finish, on a front panel, say

46. Modern alternative to a #47, e.g.

47. Navigation radio

48. "We got _____!" - early ham radio headline

50. S, SWR and others

51. Bad WX on KH8?

55. Suffix with posi-

56. "E pluribus unum," e.g.

57. Elevator guy

60. Lunar effect

61. Plate

62. Plenty

63. Midmonth time

64. Temporary guys

65. EI language, e.g.

Down

1. IOTA item

2. "Got it"

3. IS-land island

4. Talk incoherently

5. Hamshack sign, when transmitting

6. Grease

7. Where to find a hero

8. Fifty-fifty

9. 0 or 360

10. Prefix with -dyne

11. KL7

12. Listener to a QSO, say

13. Belonging to dx-peditioner Colvin

21. Sin minus 90

22. Severe

23. She sheep

24. DL org.

27. Wild

28. Spanish PX

29. Aligned

32. Future fish

33. Buro alt., sometimes

35. Grace word

36. A little number?

37. Word with lightning, for hams especially

38. Kind of admiral

39. Geologic periods

42. DX-peditioner Laine

43. Tick or mite cousin

44. 3-500Z, for example

45. Metric 62-across

47. KH6 garland

49. Winds of propagation

50. Long tresses

52. Billionth: Prefix

53. Last bit, in RTTY, say

54. Like a splattering SSB signal

58. PC key

59. VP6 heading from KH6

Answers on Page 48

2020-2024 Element 4 Amateur Extra Class License Question Quiz

This month we continue with Element 4 Amateur Extra Class license question pool, Subelement E1 : Commission Rules (6 exam questions out of 6 groups) (Answers on 'Last Page Calendar')

E1D01
What is the definition of telemetry?
A. One-way transmission of measurements at a distance from the measuring instrument
B. Two-way transmissions in excess of 1000 feet
C. Two-way transmissions of data
D. One-way transmission that initiates, modifies, or terminates the functions of a device at a distance

E1D02
Which of the following may transmit special codes intended to obscure the meaning of messages?
A. Telecommand signals from a space telecommand station
B. Data containing personal information
C. Auxiliary relay links carrying repeater audio
D. Binary control characters

E1D03
What is a space telecommand station?
A. An amateur station located on the surface of the Earth for communication with other Earth stations by means of Earth satellites
B. An amateur station that transmits communications to initiate, modify or terminate functions of a space station
C. An amateur station located in a satellite or a balloon more than 50 kilometers above the surface of the Earth
D. An amateur station that receives telemetry from a satellite or balloon more than 50 kilometers above the surface of the Earth

E1D04
Which of the following is required in the identification transmissions from a balloon-borne telemetry station?
A. Call sign
B. The output power of the balloon transmitter
C. The station's six-character Maidenhead grid locator
D. All these choices are correct

E1D05
What must be posted at the station location of a station being operated by telecommand on or within 50 km of the earth's surface?
A. A photocopy of the station license
B. A label with the name, address, and telephone number of the station licensee
C. A label with the name, address, and telephone number of the control operator
D. All these choices are correct

Element 4 Amateur Extra Class Quiz - Continued on page 34

Element 4 Amateur Extra Class Quiz - Continued from page 33

E1D06
What is the maximum permitted transmitter output power when operating a model craft by telecommand?
A. 1 watt
B. 2 watts
C. 5 watts
D. 100 watts

E1D07
Which HF amateur bands have frequencies authorized for space stations?
A. Only the 40, 20, 17, 15, 12, and 10 meter bands
B. Only the 40, 20, 17, 15, and 10 meter bands
C. Only the 40, 30, 20, 15, 12, and 10 meter bands
D. All HF bands

E1D08
Which VHF amateur bands have frequencies authorized for space stations?
A. 6 meters and 2 meters
B. 6 meters, 2 meters, and 1.25 meters
C. 2 meters and 1.25 meters
D. 2 meters

E1D09
Which UHF amateur bands have frequencies authorized for space stations?
A. 70 cm only
B. 70 cm and 13 cm
C. 70 cm and 33 cm
D. 33 cm and 13 cm

E1D10
Which amateur stations are eligible to be telecommand stations of space stations (subject to the privileges of the class of operator license held by the control operator of the station)?
A. Any amateur station designated by NASA
B. Any amateur station so designated by the space station licensee
C. Any amateur station so designated by the ITU
D. All these choices are correct

E1D11
Which amateur stations are eligible to operate as Earth stations?
A. Any amateur station whose licensee has filed a pre-space notification with the FCC's International Bureau
B. Only those of General, Advanced or Amateur Extra Class operators
C. Only those of Amateur Extra Class operators
D. Any amateur station, subject to the privileges of the class of operator license held by the control operator

Element 4 Amateur Extra Class Quiz - Continued on page 35

Element 4 Amateur Extra Class Quiz - Continued from page 34

E1D12
Which of the following amateur stations may transmit one-way communications?
A. A space station, beacon station, or telecommand station
B. A local repeater or linked repeater station
C. A message forwarding station or automatically controlled digital station
D. All these choices are correct

Gloucester County Amateur Radio Club
General Membership Meeting Minutes
Wednesday, October 5, 2022

The meeting opened @ 1932 Hours by Vice President Jonathan Pearce, WB2MNF with the Pledge of Allegiance to the Flag.

ATTENDANCE : In person : 31; ZOOM : 15

Jon noted the recent passing of **Ray Martin W2RM**, a long-time member and pillar of the Club.

GUESTS : None
NEW MEMBERS : Gus Swartout KC3TGB and **Frank Reyes KD2ZHA**.

Jon noted that four additional new members had joined recently.

The minutes from the September General Meeting, as published in The Crosstalk, were approved.

TREASURER : Alan Arrison KB2AYU reported the following YTD Budgeted Items :

- Income : $9,933
- Expenses : $6,005
- Net Gain : $3,927

Hamfest income of $2,555 was less than in the past two years, perhaps due to the weather forecast. Half of the insurance bill (about $900) and the annual mowing cost of about $1,000 remain to be paid. The cost of replacing the HF tower and new beam antenna was $9,650, leaving about $4,500 from money raised via Go Fund Me that can be applied to the VHF project. The Treasurer's Report was accepted.

CLUBHOUSE : Now that the Hamfest is behind us, **Alan Arrison KB2AYU** said we can get back to working on the VHF station and helpers will be needed. **Frank Romeo N3PUU** has added insulation between wall studs and will pick up paneling tomorrow. An 80 meter inverted Vee antenna will be installed on the new HF tower. In summary, the Clubhouse is in good shape.

CLUB NETS : Steve Farney W2SEF reported an average of 12 check-ins to the Tuesday Noon 2 Meter Nets and an average of 13 to the Thursday Evening 2 Meter Nets. **Jim Clark KA2OSV** reported 2 check-ins to the Tuesday Evening 10 Meter Net last night and 4 the week before.

DX and CONTEST COMMITTEE : Jerry Barnish K2EAB reminded the Club of the upcoming CQ WW SSB DX Contest on October 29 and 30. Jon said the Club station may be open for this event and, if so, will be announced by email. Also, the ARRL EME contest takes place October 15 and 16.

REPEATERS : Last week **Alan Arrison KB2AYU** and **Chris Prioli AD2CS** checked antennas and feedlines at the Pitman water tower. While not perfect, they were good enough to place the 442.100 MHz repeater back into service.

EDUCATION : Chris Prioli AD2CS said we are now at the halfway point for the licensing classes. There are 5 students for Technician, 4 for General and 6 or 7 for Extra. The issue with PayPal appears to be resolved such that students can now pay for the classes.

October 2022 General Membership Meeting Minutes - Continued on page 37

October 2022 General Membership Meeting Minutes - Continued from page 36

HAMFEST : Sheldon Parker K2MEN noted that the gloomy weather forecast may have affected attendance, but the Hamfest was a great success nevertheless. The flyer for next year will emphasize that it is a "Rain or Shine" event, and covered space will be offered in the pavilions. **Alan Arrison KB2AYU** noted that we had great volunteer support from Club members, particularly from our newest members.

TECHNICAL COMMITTEE : Jonathan Pearce WB2MNF said :

- The GCARC BoD has approved purchase of VHF equipment with $11,164 grant money received by the Gloucester County Amateur Radio Foundation (a501(c)3 entity)
- A check for $25,000 has been received from the ARRL foundation and Jon has begun discussions with local zoning officials regarding the proposed new VHF tower
- Club members can donate 0.5¢ to the GCARF for each dollar spent on Amazon by signing up for Amazon Smile
- The Club has a YouTube channel where we will try to post all future presentations. Help is sought from Club members that have video editing skills
- The Clubhouse has a spiffy new sign that replaces the old shabby one. Also, the Clubhouse has a phone number : **856-244-6914**
- **Mark Federici WM2Y** asked about the SLACK channel. This has been inactive, so Jon is setting up a DISCORD account for GCARC Project Collaborations
- Jon showed a photo of the test bench that has been set up by **Chris Prioli AD2CS**. A future Tech Saturday will cover use of this equipment
- The next Tech Saturday will be a Field Trip to the RCA Museum at Rowan University, hosted by **Anthony Cerami N2OAC**, so don't go to the Clubhouse. Talk-in will be provided on the 147.180 MHz repeater by **Chris Prioli AD2CS**
- The program following the General Membership Meeting tonight will be an overview of the new HF tower and beam by **Alan Arrison KB2AYU**
- The program following the November 2nd General Membership Meeting will be given by **Riley Hollingsworth K4ZDH** and the November Tech Saturday will focus on using the new HF station
- The program following the December 7th General Membership Meeting will be an introduction to 3D Printing and the following Tech Saturday will be on 3D Printing.

CONSTITUTION COMMITTEE : No report.

HEALTH and WELFARE : Charlie Wahl KC2STO still is in Inspira and **Greg Ciraula W5DO** is receiving treatment for a medical issue..

FOXHUNT : Mark Federici WM2Y was first to find the "Fox" that had been hidden below ground level by **Frank Romeo N3PUU**.

OLD BUSINESS : None

October 2022 General Membership Meeting Minutes - Continued on page 38

October 2022 General Membership Meeting Minutes - Continued from page 37

NEW BUSINESS :

Karl Frank W2KBF and **Bob Keogh KD2NEC** reviewed the October 1st ARRL Simulated Emergency Test in which 44 formal and informal messages were passed in an orderly manner. New this year was use of the W2MMD-3 Winlink RMS and transmission of pictures to a simulated EOC via amateur radio.

Herb Dyer KT2Y said that a record 167 hams provided communications support to the MS 150 City to Shore event on September 24th and 25th.

The Nominating Committee has identified a slate of candidates for office in 2023 :

- **President : Jonathan Pearce WB2MNF**
- **Vice President : Ron Block NR2B**
- **Treasurer : Alan Arrison KB2AYU**
- **Recording Secretary : Karl Frank W2KBF**
- **Corresponding Secretary : Frank Romeo N3PUU**
- **Director : Chris Prioli AD2CS**
- **Director : Jim Wright N2GXJ**
- **Trustee : John O'Connell K2QA**

Additional nominations from the floor will be taken at the November 2nd General Membership Meeting and elections will occur at the December 7th General Membership Meeting.

Following the close of the meeting tonight **Alan Arrison KB2AYU** will present an overview of the new HF tower and beam.

Vice President Jonathan Pearce WB2MNF closed the meeting @ 2030 Hours.

Respectfully Submitted,
Karl Frank W2KBF,
GCARC Recording Secretary

November 10, 1775

Gloucester County Amateur Radio Club
Board of Directors Meeting Minutes
Wednesday, October 19, 2022

Meeting opened @ 1900 Hours by President Tony Starr K3TS.

ATTENDANCE :

- President Tony Starr K3TS
- Vice President Jonathan Pearce WB2MNF
- Treasurer Alan Arrison KB2AYU
- Recording Secretary Karl Frank W2KBF
- Corresponding Secretary Ron Block NR2B
- Director Jim Clark KA2OSV
- Director Chuck Colabrese WA2TML
- Director Jeff Garth WB2ZBN
- Director Herb Dyer, KT2Y
- Director Bill Price, NJ2S (via ZOOM)
- Member Frank Romeo N3PUU
- Member John O'Connell K2QA
- Member Chris Prioli AD2CS

MINUTES : The minutes of the September BoD Meeting were approved.

NEW MEMBER APPLICATIONS :
The following applications were received and approved :

- **David Sheppard, W2PAX, General Class, of Naples, FL**
- **Miroslaw Radon, KE2AEW, Technician Class, of Berlin, NJ**
- **Andy Asch, N2MVD, Technician Class, of Browns Mills, NJ (Attending AD2CS' General class)**
- **Leonard Rust IV, of Sewell, NJ, (Attending AD2CS' Technician class)**
- **Donald Martel, of Blackwood, NJ, (Attending AD2CS' Technician class)**
- **Ralph Daggan, of Sewell, NJ, (Attending AD2CS' Technician class)**

TREASURER : Alan Arrison KB2AYU reported YTD Budgeted Items :

- Income : $10,104
- Expenses : $6,979
- Net Gain : $3,124

A mowing expense of approximately $1,000 remains to be paid and refilling the propane tank will cost about $400. Of the $14,000 in donations received for the Rebuilding Fund, approximately $4,000 remains that can be put toward the VHF station. The Treasurer's Report was accepted.

CLUBHOUSE : Alan Arrison KB2AYU reported that, thanks mostly to **Frank Romeo N3PUU**, the VHF room has been insulated, wired and paneled. AC power has been run to the base of the new HF tower and the HF station is back in operation. The SWR of the new beam is essentially flat on 15 and 20 meters and a bit higher on 40 meters but not so high as to preclude use of the linear amplifier.

October 2022 Board of Directors Meeting Minutes - Continued on page 40

Alan anticipates that the HF station will be used for the upcoming CQ WW SSB Contest. Contacts on 2 Meters were attempted during the recent EME contest but there was local electrical noise. Cutting power to various devices revealed interference from a wall wart power supply, LED ceiling lights plus some fluorescent lights. The Clubhouse needs a new roof, which will be discussed under New Business.

CLUB NETS : Chris Prioli AD2CS reported 10 check-ins for the most recent Tuesday Noon Net. A few people were on the 10 Meter Net last night and **Jim Clark KA2OSV** had 4 check-ins the week before that.

DX and CONTESTS : Tony Starr K3TS noted that the solar flux has been as high as 165 lately, causing the MUF to be above 33 MHz with great conditions on 10 and 15 meters. The CQ WW SSB contest is a major event that will take place on October 29 and 30 (the CQ WW CW Contest is over Thanksgiving weekend). **Chuck Colabrese WA2TML** is available as mentor for new operators during the CQ WW SSB contest and Tony is looking for additional helpers. **John O'Connell K2QA** has updated N1MM logging software and **John Hill W2HUV** has switched the linear amplifier over to local use for the contest. Tony wants the Club station to be open for the major SSB contests, there are about four per year. The Stew Perry 160 Meter Contest takes place this weekend.

REPEATERS : Chris Prioli AD2CS reports noise on the 440 repeater and **Frank Romeo N3PUU** said he cannot key it up from his QTH using his mobile station.

EDUCATION COMMITTEE : Chris Prioli AD2CS reports 5 studying for Technician, 3 for General and 7 for Extra. There will be two more weeks of classes before VE testing. The Monday night DIGI net, covering FLDIGI, is being conducted both on ZOOM and on the repeater to avoid the difficulties of switching between voice and digital modes. 14 checked in to the first session and 7 or 8 last Monday. These sessions are being recorded and will be posted to the Club's YouTube channel. After FLDIGI, the topic will be VARA (HF) and VARA FM.

HAMFEST : No Report.

TECHNICAL COMMITTEE :

- **Jonathan Pearce WB2MNF** said the GCARF has established a ZOOM account that may be used for any Club activity, which eliminates the need to use the personal accounts of Club members
- The GCARC YouTube site is up and running and receiving moderate use
- A DISCORD site has been set up as a communications space for Club members to collaborate on projects
- Jon had a preliminary discussion with a Harrison Township zoning official concerning installation of the new VHF tower
- Jon and **John O'Connell K2QA** met with Cooper University Medical Center personnel who are interested in setting up a HF Winlink station at their facility. CUMC also provided Jon with a 220 MHz radio to explore the possibility of establishing a 220 MHz Winlink network.

CONSTITUTION : No Report.

October 2022 Board of Directors Meeting Minutes - Continued on page 41

October 2022 Board of Directors Meeting Minutes - Continued from page 40

HEALTH and WELFARE : Charlie Wahl KC2STO was released from the hospital but has since been readmitted and then released again.

OLD BUSINESS : Tony Starr K3TS commented on how much he enjoyed the recent GCARC field trip to the RCA Museum at Rowan University and thanked **Anthony Cerami N2OAC** and the other tour guides.

NEW BUSINESS :
The Clubhouse needs a new roof so **Frank Romeo N3PUU** met with two roofing contractors. The first provided a high bid but Frank thinks the second contractor will come in much lower. Frank hopes to have a quote in time for the next General Membership Meeting. **John O'Connell K2QA** demonstrated the "HamClubOnline" software that is used to record Club membership, activities, and other statistics for Club members. This would be used in parallel to the databases maintained by **Jeff Garth WB2ZBN**. **Jonathan Pearce WB2MNF** said he would find this useful to document use of the VHF room that is being funded by the ARDC. After much discussion, it was decided to implement this database for evaluation by several administrators, particularly Jeff.

MISCELLANEOUS : Frank Romeo N3PUU said the next Foxhunt will take place in November with **Marc Federici WM2Y** as the Fox. **Bill Price NJ2S** asked about the condition of some solar panels and **Alan Arrison KB2AYU** said they were not in use currently because the power connectors had been ripped from the back.

The meeting was adjourned @ 2055 Hours.

Respectfully Submitted,
Karl Frank W2KBF,
GCARC Recording Secretary

Friday, November 11, 2022

Kansas QSO Party
August 27, 2022

Call : K3TS
Operator (s) : K3TS
Station : K3TS

Class : Single Op LP
QTH : SNJ
Operating Time (hrs) : 2:45
Location : Out of State/Province

Summary :

Band	CW Qs	Ph Qs	Dig Qs
20 :	52	26	

Total : 52 26 0 Mults : 42
Total Score : 8,836

Club : Frankford Radio Club **31**

Comments : *Scored less than last year, but had a lot of other things to do this weekend. A fun QSO party to try if you have not. Lots of mobiles and mult-county stations.*

73 de K3TS

New Jersey QSO Party
September 17, 2022

Call : K3TS
Operator (s) : K3TS
Station : K3TS

Class : Mob/Rov/Port LP
QTH : MD
Operating Time (hrs) : 1
Location : Out of State/Province

Summary :

Band	CW Qs	Ph Qs	Dig Qs
40 :	12		

Total : 12 0 0 Mults : 11
Total Score : 528

Club : Frankford Radio Club **34**

Comments : *Operating mobile from Berlin, MD, parked along the shore of the Sinepuxent Bay, across from Assateague Island. Kenwood TS-480HX (150 watts), Hustler mobile whip.*

WAE DX Contest, SSB
September 10, 2022

Call : AB2E
Operator (s) : AB2E
Station : AB2E

Class : Single Op HP
QTH : SNJ
Operating Time (hrs) : 2
Location : USA

Summary :

Band	QSOs	QTCs	Mults
80 :	5	4	12
40 :	21	22	33
20 :	11	10	18
15 :	1	0	2

Total : 38 36 65
Total Score : 4,810

Club : Frankford Radio Club **32**

Comments :
Rig : FTDX-9000D/OM Power 2000A+
Antenna : all wires
80m dipole @ 95ft
40m dipole @ 90ft
20m delta loop @ 70ft
15m fan dipole homebrew @ 65ft (10m/15m)

Tks QSOs, typically many non-radio activities took me away from the radio. What little time I had the condx seemed rather poor on 40/80. EU stations had very low numbers late into Sat so condx must have been poor for them.

73
Darrell AB2E

Contest : WAESSB

Band	Q/QTC	QSOs	Pts	Mlt	Pt/Q
3.5	QSO	5	5	12	1.0
3.5	SQTC	4	4	0	1.0
7	QSO	21	21	33	1.0
7	SQTC	22	22	0	1.0
14	QSO	1	11	18	1.0
14	SQTC	10	10	0	1.0
21	QSO	1	1	2	1.0
Total	All	74	74	65	1.0

Score : 4,810
1 Mult = 1.1 Q's

New Jersey QSO Party
September 17, 2022

Call : AB2E
Operator (s) : AB2E
Station : AB2E

Class : Single Op HP
QTH : SALE
Operating Time (hrs) : 4

Summary :

Band	CW Qs	Ph Qs	Dig Qs
80 :	53	2	0
40 :	103	28	0
20 :	45	42	0
15 :	2	0	0
Total :	203	72	0

Mults : 53
Total Score : 25,334

Club : Frankford Radio Club **33**

Comments :
Contest : NJ QSOPARTY
Rig : FTDX-9000D/OM Power 2000A+
Antennas : all wires
80m dipole @ 95FT
75M dipole @ 90ft
40m dipole @ 85ft
20m delta loop @ 70ft
15m/10m homebrew fan dipole @ 65ft
Operating time : 4 hours

This is the first time in a number of years that I've operated this contest. I always enjoyed it and in the late 60s it was something to behold. Wall to wall activity on 40 and 80 in the evening. In recent years, not much activity by comparison I'm afraid. Thanks to all who called in, being in Salem County helped, I believe I was the only station on for that mult.

73 Darrell AB2E

Band	Mode	QSOs	Pts	Mul	Pt/Q
3.5	CW	53	106	2	2.0
3.5	LSB	2	2	0	1.0
7	CW	103	206	10	2.0
7	LSB	28	28	17	1.0
14	CW	45	90	9	2.0
14	USB	42	42	14	1.0
21	CW	2	4	1	2.0
Total	Both	275	478	53	1.7

Score : 25,334
1 Mult = 5.2 Q's

CQ Worldwide DX Contest, RTTY
September 24, 2022

Call : AB2E
Operator (s) : AB2E
Station : AB2E

Class : SO(A)AB HP
QTH : SNJ
Operating Time (hrs) : 5
Location : USA

Summary :

Band	QSOs	State/Prov	DX	Zones
80 :	4	4	1	2
40 :	34	15	13	8
20 :	0	0	0	0
15 :	68	19	19	11
Total :	106	38	33	21

Total Score : 17,480

Club : Frankford Radio Club **35**

Comments :
Rig : FTDX-9000D/OM Power 2000A+
Antennas : all wires
160m no antenna, came down in storm
80m dipole @ 95FT
40m dipole @ 90ft
20m no antenna (wind brought down delta loop Fri at 5PM!)
15m homebrew fan dipole @ 65ft
10m tangled in 15m part of fan dipole so could not use

OK, some visits from Murphy, but was able to have fun in my limited time. No antennas for 10m, 20m, and 160m this time! Hardware performed well. For RTTY I was using a Signalink USB, N1MM+ w/MMTTY launched from N1MM.

Thanks to all for the QSOs!

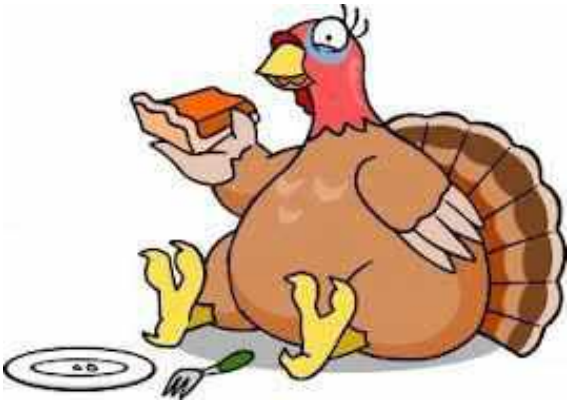
Contest : CQWWRTTY

Band	QSOs	Pts	ZN	Cty	SP	Pt/Q
3.5	4	4	2	1	4	1.0
7	34	69	8	13	15	2.0
21	68	117	11	19	19	1.7
Total	106	190	21	33	38	1.8

Score : 17,480
1 Mult = 1.2 Q's

To be added to the DX HONOR ROLL,
Please contact Ernest Kraus, KD2EAV
meanddelcanotc@verizon.net

Name/Callsign	DXCC
Bill Grim, W0MHK	352
Dave Strout, W2YC	349
Darrell Neron, AB2E	328
Ray Martin, W2RM (Silent Key)	270
John Hill, W2HUV	252
Ken Denson, WB2P	248
Vinnie Sallustio, N4NYY	231
Tony Starr, K3TS	211
Dennis Sandole, K2SE	204
Jim Wright, N2GXJ	196
Matt Wilson, K2MFW	195
Sheldon Parker, K2MEN	178
Christopher Wawak, KC2IEB	141
Howard Marder, WA2IBZ	137
Eric Morris, N2BRJ	127
Phil Nunzio, WA3RGY	123
Bart Kleczynski, AC2PT	106
Chuck Capasso, WB2PGE	103
Rich Subers, W2RHS	102
Harry Strahlendorf Jr, W3DNQ	87
Curt Myers, K2CWM	80
Jim Clark, KA2OSV	68
Lee Marino, N2LAM	35
Updated As Of 10/24/2022	



November Birthdays

Congratulations to our members who are celebrating a birthday this month

Bishop Brian Burgess, KD4UTL
Dale Christman, KD2NOC
Bob Durham, W2RAD
Bob Fields, KC6AOH
Bob Harrison, WA3KOL
Bob Keogh, KD2NEC
Ernest Kraus, KD2EAV
Chuck Lanard, KD2EIB
Howard Marder, WA2IBZ
Earl Moore, KC2NCH
Cory Sickles, WA3UVV (President 1993)
Rich Subers, W2RHS

In Memoriam - November Birthdays

Silent Keys :
Henry "Hank" Basch, N2DJN
Peter Butler, WB2B
Glenn Farnsworth, K2EHM
John Fisher Jr, K2JF (President 1988)
Elwood "Woody" Franz Sr. K4HKU
- **(President 1960, Charter Member)**

Ernest Garside, WA2TDI
Russel Glans, N2ASV (President 1983)
George Hankins, N2CFW
Charles Jenkins III, W2OGZ
Francis "Frank" King, WA2WGA
Andrea Logan, KB2ZWK
Ray Martin, W2RM (President 1979)
Eleanor Mattison, N2JXS
James McDonald Sr, N2AIV
Robert Nicotera, KB2ERL

Hugh Turnbull, W3ABC
- **ARRL Atlantic Vice Director 1980-1982**
- **ARRL Atlantic Director 1982-1996**
- **ARRL Vice President 1996**
- **ARRL Honorary Vice President 2000**

Edward Vickner Jr, K2ZE
Paul Walton, W2YNR (President 1964)

Crosstalk Submissions

This is your Club Newsletter. Make use of it.

If you have stories or photos of your hobby that you would like to share with the Club, please do so!

We will keep covering all of the GCARC events, but it is also nice to get those personal perspectives to include in every issue. Connecting through experiences is what makes the Gloucester County Amateur Radio Club a *REAL* Club.

All submissions, queries, comments, and editorials should be addressed to :
Jeff Garth, WB2ZBN at djgrath1 <*at*> gmail <*dot*> com

Submission deadline for the December 2022 issue : Sunday, November 20, 2022

Club Website www.w2mmd.org
Club E-Mail Reflector: GCARC <*at*> Mailman <*dot*> QTH <*dot*> Net

November 2022 Contest Calendar

WA7BNM Contest Calendar : www.contestcalendar.com

Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 1
ICWC Medium Speed Test	0300Z-0400Z, Nov 1
QCX Challenge	0300Z-0400Z, Nov 1
Silent Key Memorial Contest	0600Z-0859Z, Nov 1
RTTYOPS Weeksprint	1700Z-1900Z, Nov 1
Phone Weekly Test	0230Z-0300Z, Nov 2
A1Club AWT	1200Z-1300Z, Nov 2
CWops Test	1300Z-1400Z, Nov 2
Mini-Test 40	1700Z-1759Z, Nov 2
VHF-UHF FT8 Activity Contest	1700Z-2100Z, Nov 2
NCCC Sprint	0230Z-0300Z, Nov 11
K1USN Slow Speed Test	2000Z-2100Z, Nov 11
PODXS 070 Club Triple Play Low Band Sprint	0000Z, Nov 12 to 2359Z, Nov 14
WAE DX Contest, RTTY	0000Z, Nov 12 to 2359Z, Nov 13
ARRL EME Contest	0000Z, Nov 12 to 2359Z, Nov 13
10-10 Int. Fall Contest, Digital	0001Z, Nov 12 to 2359Z, Nov 13
SARL VHF/UHF Analogue Contest	0300Z-0500Z, Nov 12 (6m) and 0501Z-0700Z, Nov 12 (2m) and 0701Z-0900Z, Nov 12 (70cm) and 0300Z-0500Z, Nov 13 (6m) and 0501Z-0700Z, Nov 13 (2m) and 0701Z-0900Z, Nov 13 (70cm)
JIDX Phone Contest	0700Z, Nov 12 to 1300Z, Nov 13
SKCC Weekend Sprintathon	1200Z, Nov 12 to 2400Z, Nov 13
OK/OM DX Contest, CW	1200Z, Nov 12 to 1200Z, Nov 13
FISTS Saturday Sprint	1600Z-1800Z, Nov 12
CQ-WE Contest	1900Z-2300Z, Nov 12 (CW/Digital) and 0100Z-0500Z, Nov 13 (Phone) and 1900Z-2300Z, Nov 13 (Phone) and 0100Z-0500Z, Nov 14 (CW/Digital)
AWA Bruce Kelley 1929 QSO Party	2300Z, Nov 12 to 0300Z, Nov 14 and 2300Z, Nov 19 to 0300Z, Nov 21
FIRAC HF Contest	0700Z to 1700Z, Nov 13
Classic Exchange, Phone	1400Z, Nov 13 to 0800Z, Nov 14 and
K1USN Slow Speed Test	0000Z-0100Z, Nov 7
ICWC Medium Speed Test	1300Z-1400Z, Nov 7
OK1WC Memorial	1630Z-1729Z, Nov 7
ICWC Medium Speed Test	1900Z-2000Z, Nov 7
RSGB 80m Autumn Series, Data	2000Z-2130Z, Nov 7
Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 8
Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 15
ICWC Medium Speed Test	0300Z-0400Z, Nov 15
RTTYOPS Weeksprint	1700Z-1900Z, Nov 15
Phone Weekly Test	0230Z-0300Z, Nov 16
A1Club AWT	1200Z-1300Z, Nov 16
CWops Test	1300Z-1400Z, Nov 16
Mini-Test 40	1700Z-1759Z, Nov 16
VHF-UHF FT8 Activity Contest	1700Z-2100Z, Nov 16
Mini-Test 80	1800Z-1859Z, Nov 16
CWops Test	1900Z-2000Z, Nov 16
RSGB 80m Autumn Series, SSB	2000Z-2130Z, Nov 16
Walk for the Bacon QRP Contest	0000Z-0100Z, Nov 17 and 0200Z-0300Z, Nov 18
NAQCC CW Sprint	0130Z-0330Z, Nov 17
CWops Test	0300Z-0400Z, Nov 17
CWops Test	0700Z-0800Z, Nov 17
RTTYOPS Weeksprint	1700Z-1900Z, Nov 17
NTC QSO Party	1900Z-2000Z, Nov 17
NCCC RTTY Sprint	0145Z-0215Z, Nov 18

November 2022 Contest Calendar - Continued on page 47

November 2022 Contest Calendar

WA7BNM Contest Calendar : www.contestcalendar.com

November 2022 Contest Calendar - Continued from page 46

NCCC Sprint	0230Z-0300Z, Nov 18
YO International PSK31 Contest	1600Z-2200Z, Nov 18
K1USN Slow Speed Test	2000Z-2100Z, Nov 18
SARL Field Day Contest	1000Z, Nov 19 to 1000Z, Nov 20
LZ DX Contest	1200Z, Nov 19 to 1200Z, Nov 20
All Austrian 160-Meter Contest	1600Z-2359Z, Nov 19
REF 160-Meter Contest	1700Z, Nov 19 to 0100Z, Nov 20
South American Integration Contest CW	1800Z, Nov 19 to 2100Z, Nov 20
RSGB 1.8 MHz Contest	1900Z-2300Z, Nov 19
Feld Hell Sprint	1900Z-2059Z, Nov 19
ARRL Sweepstakes Contest, SSB	2100Z, Nov 19 to 0300Z, Nov 21
Homebrew and Oldtime Equipment Party	1300-1500Z, Nov 20 (40m) and 1500-1700Z, Nov 20 (80m)
FISTS Sunday Sprint	2100Z-2300Z, Nov 20
Run for the Bacon QRP Contest	2300Z, Nov 20 to 0100Z, Nov 21
K1USN Slow Speed Test	0000Z-0100Z, Nov 21
ICWC Medium Speed Test	1300Z-1400Z, Nov 21
OK1WC Memorial	1630Z-1729Z, Nov 21
ICWC Medium Speed Test	1900Z-2000Z, Nov 21
Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 22
ICWC Medium Speed Test	0300Z-0400Z, Nov 22
RTTYOPS Weeksprint	1700Z-1900Z, Nov 22
SKCC Sprint	0000Z-0200Z, Nov 23
Phone Weekly Test	0230Z-0300Z, Nov 23
A1Club AWT	1200Z-1300Z, Nov 23
CWops Test	1300Z-1400Z, Nov 23
Mini-Test 40	1700Z-1759Z, Nov 23
Mini-Test 80	1800Z-1859Z, Nov 23
CWops Test	1900Z-2000Z, Nov 23
CWops Test	0300Z-0400Z, Nov 24
CWops Test	0700Z-0800Z, Nov 24
RTTYOPS Weeksprint	1700Z-1900Z, Nov 24
RSGB 80m Autumn Series, CW	2000Z-2130Z, Nov 24
NCCC RTTY Sprint	0145Z-0215Z, Nov 25
NCCC Sprint	0230Z-0300Z, Nov 25
K1USN Slow Speed Test	2000Z-2100Z, Nov 25
CQ Worldwide DX Contest, CW	0000Z, Nov 26 to 2400Z, Nov 27
Ham Spirit Contest, SSB	0600Z, Nov 26 to 0559Z, Nov 27
K1USN Slow Speed Test	0000Z-0100Z, Nov 28
QCX Challenge	1300Z-1400Z, Nov 28
ICWC Medium Speed Test	1300Z-1400Z, Nov 28
OK1WC Memorial	1630Z-1729Z, Nov 28
ICWC Medium Speed Test	1900Z-2000Z, Nov 28
QCX Challenge	1900Z-2000Z, Nov 28
RSGB FT4 Contest	2000Z-2130Z, Nov 28
Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 29
ICWC Medium Speed Test	0300Z-0400Z, Nov 29
QCX Challenge	0300Z-0400Z, Nov 29
RTTYOPS Weeksprint	1700Z-1900Z, Nov 29
Phone Weekly Test	0230Z-0300Z, Nov 30
A1Club AWT	1200Z-1300Z, Nov 30
CWops Test	1300Z-1400Z, Nov 30
Mini-Test 40	1700Z-1759Z, Nov 30
Mini-Test 80	1800Z-1859Z, Nov 30
CWops Test	1900Z-2000Z, Nov 30
UKEICC 80m Contest	2000Z-2100Z, Nov 30

C	Q	S	S	■	O	L	D	E	N	■	H	A	L	L
A	S	A	P	■	N	U	E	V	O	■	E	L	U	L
Y	L	R	L	■	A	B	L	E	R	■	T	A	R	O
■	■	D	U	C	I	E	I	N	T	H	E	S	K	Y
E	D	I	T	O	R	■	■	■	H	A	R	K	E	D
W	A	N	T	S	■	F	E	T	■	R	O	A	R	S
E	R	I	E	■	R	E	A	R	M	S	■	■	■	■
S	C	A	R	B	O	R	O	U	G	H	F	A	R	E
■	■	■	■	L	E	A	N	E	R	■	O	R	E	O
M	A	T	T	E	■	L	E	D	■	L	O	R	A	N
A	C	R	O	S	S	■	■	■	M	E	T	E	R	S
R	A	I	N	S	O	N	S	W	A	I	N	S	■	■
T	R	O	N	■	L	A	T	I	N	■	O	T	I	S
T	I	D	E	■	A	N	O	D	E	■	T	O	N	S
I	D	E	S	■	R	O	P	E	S	■	E	R	S	E

Page 32 Crossword Puzzle Answers

Regional Skywarn Websites For On-Line And In-Person Training Classes

Philadelphia/Mt Holly Skywarn : www.weather.gov/phi/skywarn
State College, PA Skywarn : www.weather.gov/ctp/skywarn
Pittsburgh, PA Skywarn : www.weather.gov/pbz/skywarn

Skywarn Forum : Skywarn Storm Spotter and Weather Discussions : https://www.skywarnforum.com

NWS State College SkyWarn Spotter Training Session
Virtual Basic SkyWarn Training
Wednesday, November 2, 2022 : 1800 to 2000 Hours
Register Here :
https://register.gotowebinar.com/register/7514841344881357327

2022 Club Committees

Standing Committees	Committee Chairs
Budget	**Al Arrison, KB2AYU**
Constitution & By-Laws	**Ron Block, NR2B**
Education	**Chris Prioli, AD2CS**
Field Day	**Vinnie Sallustio, N4NYY**
Hamfest	**Sheldon Parker, K2MEN and Bill Price, NJ2S**
Health, Welfare, & Silent Keys	**Bill Price, NJ2S**
Hospitality	**Jeff Garth, WB2ZBN**
Membership	**Bob Fields, KC6AOH**
Membership Badges	**Chuck Colabrese, WA2TML**
Nominations	**Tony Starr, K3TS**
Publicity	**Bob Fields, KC6AOH**
Repeaters	**Herb Dyer, KT2Y**
W2MMD Clubhouse Site	**Al Arrison, KB2AYU**

Activity Committees	Committee Chairs
Awards & Certificates	***Open Chair***
Club Publications & Historian	**Jeff Garth, WB2ZBN**
Contests	**Tony Starr, K3TS**
DX	***Open Chair***
GCARC Family Picnic	***Open Chair***
GCARC Foxhunts	**Jim Wright, N2GXJ**
GC-ARES Emergency Coordinator	**Bob Keogh, KD2NEC**
Holiday Dinner Party	***Open Chair***
License Testing/VEC Liaison	**Gary Reed, N2QEE**
Membership Roster Database	**Jeff Garth, WB2ZBN**
Programs : General Meetings & Tech Saturdays	**Jon Pearce, WB2MNF**
Radio Nets	**Jim Clark, KA2OSV**
Technical	**Jon Pearce, WB2MNF**
W2MMD License Trustee	**Darrell Neron, AB2E**
W2MMD Special Event Station	**Mark Gottlieb, KK2L**

GCARC <*at*> Mailman <*dot*> QTH <*dot*> Net e-mail reflector guidelines

1. **No attachments** (e.g. pictures, files) are allowed on the reflector.
2. If you have Club-related pictures that you would like to share, you can send them to the webmaster, he will put them on the website and will send out a general e-mail to all the members.
3. Otherwise, the pictures will have to be sent to the members' addresses.
4. URLs/Hyperlinks are acceptable on the reflector.
5. Do not send any messages with e-mail addresses in the **BCC** (**Blind Carbon Copy**) field. The message will be rejected. Use only the **To:** or **CC:** fields.
6. Members are subscribed to the reflector using the member's e-mail address from the roster database. You must use that address when sending an e-mail via the reflector.
7. If you use another address on the reflector, the message will get rejected or "*bounced*", because the reflector does not recognize that address. Whenever a message sent to reflector is rejected or *"bounced"* for various reasons, the administrator has to log-in to the Mailman.QTH website and approve the message.

The W2MMD Repeaters

2 Meter Repeater
Output : 147.180 MHz
Input : 147.780 MHz
Offset : +600 kHz - PL : 131.8 Hz
(Conventional FM plus C4FM Capability)
EchoLink : W2MMD-R

70 cm Repeater (BACK ON THE AIR)
Output : 442.100 MHz
Input : 447.100 MHz
Offset : +5 MHz - PL : 131.8 Hz
(Conventional FM plus C4FM Capability)

The above repeaters are both
located in Pitman, NJ
GPS : 39.728481°, -75.131088°

1.25 Meter Repeater
Output : 224.660 MHz
Input : 223.060 MHz
Offset : -1.6 MHz - PL : 131.8 Hz
Location : Sewell, NJ
GPS : 39.746738°, -75.077094°

SKYWARN™ Net
Sunday @ 1930 : 147.180 MHz Repeater

Gloucester County ARES Net
Sunday @ 2000 : 147.180 MHz Repeater

The *"DigiNet"*
First / Third Mondays Of Every Month
@ 2000 Hours
ZOOM Meeting Net

Tuesday Noon Day 2M Rag Chew Net
Every Tuesday @ 1200 Hours

Tuesday Night 10M Rag Chew Net
Every Tuesday @ 2000 Hours
Tune in on 28.465 MHz or 28.475 MHz

Thursday Night 2M Rag Chew Net
Every Thursday @ 2000 Hours

Meeting Calendar

General Membership Meeting
Wednesday, November 2, 2022
1930 Hours
Live & In-Person
Pfeiffer Community Center
Simulcast Live on ZOOM

Board of Directors Meeting
Wednesday, November 16, 2022
1900 Hours
W2MMD Clubhouse

"Ask not what your Club can do for you, Ask what you can do for your Club"
- KA2OSV

"The big thing about being in a club and being a "Ham" is to help each other when there is a need "
- W2SEF

*** Badges ***

Need a new or replacement badge
Contact "The BadgeMan"

Chuck Colabrese, WA2TML
colabrese <*at*> comcast <*dot*> net

Question Pool Answers : E1D01:A; E1D02:A; E1D03:B; E1D04:A; E1D05:D; E1D06:A; E1D07:A; E1D08:D; E1D09:B; E1D10:B; E1D11:D; E1D12:A